## CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF CITY PLANNING

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## **600 CALIFORNIA STREET**

FEDERAL HOME LOAN BANK OF SAN FRANCISCO ENVIRONMENTAL IMPACT REPORT

**NOVEMBER 14, 1986** 

DRAFT EIR PUBLICATION DATE: NOVEMBER 14, 1986
DRAFT EIR PUBLIC HEARING DATE: DECEMBER 18, 1986

DRAFT EIR PUBLIC COMMENT PERIOD: NOVEMBER 14, 1986 TO DECEMBER 29, 1986

WRITTEN COMMENTS SHOULD BE SENT TO
THE ENVIRONMENTAL REVIEW OFFICER
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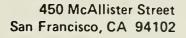


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DATE: November 14, 1986

TO: Distribution List for the 600 California Street Project Draft EIR

FROM: Barbara W. Sahm, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the

600 California Street Project

This is the Draft of the Environmental Impact Report for the 600 California Street project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the draft will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a final EIR.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them.

If you want a copy of the Final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.



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Attn.: Ms. Carol Roos, EIR Coordinator 86.85E - 600 CALIFORNIA STREET

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RETURN REQUEST REQUIRED FOR FINAL ENVIRONMENTAL IMPACT REPORT

	Office of Envirmental Review
	Please send me a copy of the Final EIR.
Signed	;
Print Yo	our Name and Address Below

## CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF CITY PLANNING

DRAFT 86.85E

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FEDERAL HOME LOAN BANK OF SAN FRANCISCO ENVIRONMENTAL IMPACT REPORT

**NOVEMBER 14, 1986** 

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### 600 CALIFORNIA STREET FEDERAL HOME LOAN BANK OF SAN FRANCISCO DRAFT ENVIRONMENTAL IMPACT REPORT

### TABLE OF CONTENTS

		Page
	INTRODUCTION	1
I.	SUMMARY	3
II.	PROJECT DESCRIPTION  A. Project Sponsor's Objectives  B. Project Location  C. Project Characteristics  D. Project Schedule, Cost and Approval Requirements	18 18 18 20 32
III.	ENVIRONMENTAL SETTING  A. Land Use and Zoning  B. Cultural Resources  C. Urban Design  D. Shadow and Wind  E. Transportation  F. Air Quality	35 35 46 47 49 52 56
IV.	ENVIRONMENTAL IMPACTS  A. Land Use and Zoning  B. Cultural Resources  C. Urban Design  D. Shadow and Wind  E. Transportation  F. Air Quality  G. Construction Noise  H. Employment  I. Residence Patterns and Housing  J. Growth Inducement	59 62 76 77 93 106 125 129 132 136
V.	MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL ADVERSE IMPACTS OF THE PROJECT	140
VI.	SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED	150
VII.	ALTERNATIVES TO THE PROPOSED PROJECT  A. Alternative A: No Project  B. Alternative B: No Transfer of Development	151 151
	Rights, 9:1 FAR C. Alternative C: No Parking	152 155
	D. Alternative D: No Exception to Planning Code, Separation of Towers and Bulk Requirements E. Alternative E: Building Height of 50 ft. at	156
	Sacramento Street with a 60-ft. Deep Setback Above	158
	F. Provision of Required Open Space Off-Site, at St. Mary's Square	159

## TABLE OF CONTENTS (Continued)

		Page	
VIII.	EIR AUTHORS AND CONSULTANTS; ORGANIZATIONS AND PERSONS CONSULTED	166	
IX.	DISTRIBUTION LIST		
Х.	APPENDICES A. Initial Study B. Wind Study Methodology C. Transportaton D. Air Quality E. Typical Noise Levels	A-1 A-2 A-42 A-48 A-58 A-60	
	LIST OF TABLES		
1.	Project Characteristics	21	
2.	Relationship of the Project to the Downtown Plan Planning Code Requirements		
3.	Relationship Between Applicable Urban Design Policies of the Master Plan and the Proposed Project		
4.	Projected Outbound Travel Demand by Mode from 600 California Street	109	
5.	Peak Pedestrian Volumes and Flow Regimen (Project Side of Street)	117	
6.	Projected Peak-Hour Intersection Volume-to-Capacity Ratios (V/C) and Levels of Service (LOS)	119	
7.	Projected Service-Vehicle Travel Attributable to the Project		
8.	Existing and Projected Curbside Carbon Monoxide Concentrations at Selected Intersections	127	
9.	Projected Daily Pollutant Emissions	128	
10.	Typical Commercial/Industrial Construction Noise Levels at 50 feet from the Source	131	
11.	Existing Uses at Project Site and Estimates of Project Employment	134	
12.	Summary Comparison of Project with Alternatives B, C, D and E	164	

## TABLE OF CONTENTS (Continued)

		Page
	<u>LIST OF FIGURES</u>	
1.	Project Location	19
2.	First, Second and Third Basement Level Plans	24
3.	Ground Floor Plan	25
4.	Second Floor Plan	26
5.	Typical Lower and Upper Office Floor Plans	27
6.	Rooftop Terrace Plan	28
7.	California Street and Sacramento Street Elevations	29
8.	Kearny Street Elevation	30
9.	View of Site Southwest along Kearny Street	37
10.	View of Site Northwest from California/Kearny Intersection (A.P. Giannini Plaza)	38
11.	View of Site South from Kearny Street	39
12.	View of Site West from Sacramento Street at Kearny St.	40
13.	Land Use in the Project Vicinity	42
14.	Planning Code Use Districts and Planning Code Height and Bulk Districts	44
15.	Photomontage of Project West from California/ Liedesdorff Intersection	79
16.	Photomontage of Project South from Kearny/ Merchant Intersection	80
17.	Photomontage of Project Northwest from A.P. Giannini Plaza	81
18.	Photomontage of Project West from Sacramento Street (East of Spring Street)	82
19.	Photomontage of Project West from Sacramento/ Waverly Intersection	83
20.	Photomontage of Project South from Portsmouth Square	84

## LIST OF FIGURES (Continued)

			Page
21.	•	Patterns - December 21 , noon, 3:00 p.m.)	95
22.		Patterns – March 21 , noon, 3:00 p.m.)	96
23.		Patterns - June 21 m., noon, 3:00 p.m.)	97
24.		Patterns – September 21 , noon, 3:00 p.m.)	98
25.	Year Round Sha	dow Trace	101
26.	Sun Path Analysis, from A.P. Giannini Plaza		102
27.	Sun Path Analys	sis, from North Side of Sacramento St.	103
28.	Transit Routes	in the Project Area	111
29.	Alternative B:	No Transfer of Development Rights, 9:1 FAR	153
30.	Alternative D:	No Exception to Planning Code, Separation of Towers and Bulk Requirements	157
31.	Alternative E:	Building Height of 50 ft. at Sacramento Street with a 60 ft. Deep Setback Above	160
32.	Alternative F:	Provision of Required Open Space Off-Site at St. Mary's Square	162

#### INTRODUCTION

This introduction explains the process of tiering environmental impact reports, and describes tiering in relation to this Draft Environmental Impact Report for the proposed 600 California Street project.

#### TIERED ENVIRONMENTAL IMPACT REPORT

Where a prior environmental impact report (EIR) has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets specified requirements must examine significant effects of the later project on the environment, with exceptions, by using a tiered report whenever feasible as determined by the lead agency. (See California Public Resources Code, California Environmental Quality Act (CEQA), Sections 21093 and 21094, including amendments effective January 1, 1986.)

The law states the Legislative intent, finding and declaring that:

Tiering of environmental impact reports will promote construction of needed housing and other development projects by 1) streamlining regulatory procedures, 2) avoiding repetitive discussions of the same issues in successive environmental impact reports, and 3) ensuring that environmental impact reports prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate upon environmental effects which may be mitigated or avoided in connection with the decision on each later project; [and] that tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous EIRs.

The law directs that, where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on the later project need not examine those effects which were either mitigated or avoided as a result of the prior EIR, or examined

at a sufficient level of detail as a result of the prior EIR to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or other means in connection with the approval of the later project.

#### 600 CALIFORNIA STREET

A tiered environmental impact report has been prepared, and is presented herein, for the proposed 600 California Street project pursuant to Sections 21093 and 21094 of CEQA. This EIR is tiered from the EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984). The cumulative impacts of the development forecast in the downtown C-3 districts of San Francisco to the year 2000, including this project, are addressed in the Downtown Plan EIR. That cumulative analysis is not repeated in the EIR for this project.

The EIR for 600 California Street identifies the project portion of the cumulative impacts forecast in the prior EIR. (The Downtown Plan EIR may be examined at the Department of City Planning, 450 McAllister Street, San Francisco; the San Francisco main library; and various branch libraries.)

The 600 California Street EIR analyzes project-specific impacts. It discusses potentially significant effects of the project that were not examined in the Downtown Plan EIR and includes applicable mitigation measures for site-specific effects.

#### I. SUMMARY

#### A. PROJECT DESCRIPTION

The Federal Home Loan Bank of San Francisco proposes to construct an office and retail building with three levels of subsurface parking that would step down from 18-stories or 244-ft. at California and Kearny Sts. to nine-stories, 138 ft.-tall at Sacramento and Kearny Sts. The Sacramento St. frontage would step down from Sacramento and Kearny to three-stories, 45 ft.-tall, at its western third. The project architect is Kohn Pedersen Fox Associates of New York, New York.

The 31,822-sq.-ft. site includes Lots 3 and 26 of Assessor's Block 241; the block is bounded by California, Kearny, Sacramento Sts. and Grant Ave., in the Financial district. The site is at the northwest corner of California and Kearny Sts. and is bounded by, California on the south, the Hartford Building and a two-story building on the west, Sacramento St. on the north, and Kearny St. on the east. The site is occupied by two buildings: a nine-story office building and a two-story, three level, parking garage. Both of the buildings would be demolished for the project. There are currently about 373 employees on the site.

As calculated under the Planning Code, the building would contain about 352,000 gross sq. ft. of gross floor area; the gross floor area as defined by the Code would include the office area and that portion of the proposed parking area in excess of the seven percent of the gross floor area of the building permitted as an accessory use and the area in excess of the seven percent proposed for replacement short-term parking spaces, which may be approved by the Planning Commission pursuant to Planning Code Section 309. This would result in a Floor Area Ratio (FAR), the ratio of the gross floor area of all building to a site (excluding space not included in the gross floor area, and thus not included in the FAR calculation, such as retail, accessory parking space and mechanical space) to site size, of about 11:1 for the 31,822-sq.-ft. development site. The overall FAR for the preservation and development lots would be less than, or equal to, 9:1.

The main building entrance would be on California St. Access to three at-grade truck loading docks, and sub-surface auto parking would be from Sacramento St. The loading area would include a truck turntable allowing trucks to completely turn around before exiting onto Sacramento St. Automobiles would exit from the sub-surface parking onto Kearny St. The three subsurface levels would contain about 232 parking spaces, 48 short-term, 82 long-term and 102 yet to be determined as short- or long-term spaces, storage and mechanical space. The ground floor would contain lobby, retail, a galleria open to California St. (connecting to the existing Hartford Building plaza), three truck loading docks and mechanical equipment. Floors two through 18, on the south portion of the building and two through nine, on the north portion, would contain office space; on top of the 18th floor of the south portion would be a landscaped rooftop terrace and a mechanical penthouse.

The building would include about 312,700 gross sq. ft. (gsf) of office space, 7,900 gsf retail, 10,400 gsf of open space (2,380 sq. ft. more than the 8,020 sq. ft. required), 21,100 gsf of mechanical and storage space, about 90,600 gsf (232 spaces) of parking, and three truck loading docks. The existing buildings on the site contain about 165,000 sq. ft. together, including 96,600 gsf of office and 68,400 gsf of parking (269 spaces). Total net changes in the floor area for the site would be net increases of about 216,100 gsf of office, 7,900 gsf of retail and 10,400 gsf of open space; a net decrease of 37 parking spaces (with a net increase of about 22,200 gsf); and an increase of up to three truck loading docks.

The project would incorporate about 65,700 sq. ft. of transferred development rights (TDRs) from as yet unidentified sites. The project height of 244 ft., plus a 22 ft. mechanical penthouse, for a maximum 266 ft. would comply with the height limit for the site, 250 ft. plus allowable extensions, a maximum of 291 ft. The project would require approval under Sections 309 and 321 of the City Planning Code. It would require allowable exceptions to exceed the maximum diagonal and length dimensions, maximum average floor area and volume reduction, all in the upper tower. The project would also require an allowable exception from the required 15 ft. setback from interior property lines, under Section 132.1 subsections (c)2A and (c)2B. The project would require Conditional Use authorization (City Planning Code Section 204.5 (c)) for parking in excess of the replacement short-term spaces and in excess of the seven percent of the gross floor area of the building permitted as an accessory use; if replacement short-term parking were not required by the Planning Commission as proposed, this parking would be

part of the Conditional Use application. Section 155(g) requires rate structures that favor short-term parking in the C-3 District. No exception is allowable under Section 309; the project sponsor has requested an opinion from the Zoning Administrator as to whether a long-term rate structure could be allowed by the variance procedure.

Demolition of the two existing buildings on the site, would take about 12 weeks. Construction would then continue for about 84 weeks, for a total expected 24 month construction period, until project completion and initial occupancy.

#### B. MAIN ENVIRONMENTAL EFFECTS

LAND USE AND ZONING (pp. 62 to 76)

The site is in the C-3-0 (Downtown Office) Use District, and a 250-S Height and Bulk District. The project would replace two buildings containing office, parking, and storage uses with office use at a greater intensity, new retail and open space uses, and a net decrease in the number of parking spaces. The project would be similar to land uses to the south, east and west in the immediate site vicinity consisting predominantly of high-rise office buildings, many of which are related to banking, finance and commerce, with some ground-level retail uses. The project would differ from land uses to the south, north and northwest which consist predominantly of low- and mid-rise commercial buildings characteristic of Chinatown, which is northwest of the site.

As required by the Planning Code, the project would provide art work and childcare in a manner to be determined. The required open space would be provided on the roof of the 18-story, south portion of the building and in the street-level galleria proposed for the California St. frontage. As stated above, the project would comply with the height requirements of the City Planning Code. The project would require an exception to the Planning Code regarding separation of towers as it would encroach into the area of the interior lot-line setback requirement on the west (Hartford Building) facade by about five ft., along the southern portion of the building. Exception to this requirement is allowable under the Planning Code (Section 132.1 subsection (c)2(A) and (c)2(B)), subject to approval under Section 309). The project would exceed the maximum length, maximum

diagonal, and maximum average floor area Bulk Limits for the upper tower zone. The project would exceed the the maximum length of 130 ft. for the upper tower by about 25 ft., the maximum diagonal dimension of 160 ft. by about ten ft., and the maximum average floor area of 12,000 sq. ft. by about 740 sq. ft. The project would have a volume reduction in the upper tower of about five percent; ten percent would be required. Exception to these bulk requirements is allowable in accordance with Section 272(a) 1, 3, 4 and 5 subject to approval under Section 309.

#### CULTURAL RESOURCES (pp. 76 to 77)

There is no evidence that prehistoric archaeological remains exist at the project site. The project site vicinity was first settled in the Spanish-Mexican (1776–1849) Period, and remained developed through the City Building Period (1858–1906), and the Twentieth Century Period (1906–present). Archival research indicates there is some possibility that artifacts from all three periods could be encountered at the site. The site was excavated for the current buildings to a depth of 10 ft. deeper than structures that occupied the site during earlier periods. Artifacts were, therefore, probably removed or destroyed. The proposed excavation to a depth of about 30 ft. would be about 18 ft. below the existing basement, however, and therefore, there is a possibility of encountering cultural artifacts from earlier periods, particularly the Gold Rush and City Building periods. Potential remains could include household utensils, lacquered wood boxes, fans, cloth, jewelry, spiced perfumes, soap and cooking utensils. Such a find could be considered of archaeological and historical significance.

#### URBAN DESIGN (pages pp. 77 to 93)

The project would demolish two buildings. Neither is rated by the Foundation for San Francisco's Architectural Heritage, or in the 1976 Department of City Planning Inventory, or designated for architectural merit in Categories I to IV or in a conservation district of the Downtown Plan.

The project would step down from about 244 ft. (excluding penthouse) in height at California and Kearny Sts. to 138-ft. at Kearny and Sacramento Sts. Two-thirds of the building, along the Sacramento St. frontage, would be 138-ft.-tall, and one-third would be 45-ft.-tall. The overall project would have a three-part vertical composition: an architectural base with open galleria, a middle shaft, and a top. The project would be

faced in light-colored masonry and stone. The 118-ft.-deep setback above the base from Sacramento St., at a height of 138 ft. (above street level at the Kearny/Sacramento intersection), of the north portion of the building, is intended to reduce the apparent height and bulk of the building along Sacramento St.

The 18-story portion of the building at California and Kearny Sts. would be visible against taller buildings in the background from viewpoints such as Powell at California Sts. (that is, from Nob Hill on the west), and Market St. at Third St. and along Kearny St. (to the south). The project would be shorter than other high-rises in the project area such as the Bank of America Building, the 580 California St. Building, the International Building, and the Hartford Building. It would be larger in scale and taller than existing small-scale, low- and mid-rise buildings west and north of the site, and in the same block in Chinatown.

#### SHADOW AND WIND (pp. 93 to 106)

The project would cast no new shadow on any Recreation and Park Department property during the hours defined by Proposition K and would thus comply with the Park Shadow Ban ordinance. The project would cast new shadow on streets, sidewalks and buildings in the project area.

A wind tunnel test for the project indicates that existing wind speeds at nine of 22 test locations exceed the 11 mph equivalent wind speed pedestrian comfort criterion established in the Downtown Plan, and wind speeds at three locations exceed the seven mph seating area criterion. At one location, on the roof of the existing 600 California building, the 26 mph hazard criteria is exceeded with the current conditions. The project would cause wind speeds to increase at five test locations (by one to four mph), to remain the same at 11 locations, and to decrease at six locations (by one to eight mph). In the one test location along California St. that currently meets the 11 mph pedestrian comfort criterion, winds would increase to 16 mph, such that this criterion would be exceeded. Winds at four locations, would be reduced by the project, but would continue to violate the applicable comfort criteria. Two of these locations are pedestrian areas along California St., one is an existing seating area within St. Mary's Square, and one is the proposed rooftop terrace area. The hazard criteria would not be exceeded at any of the locations tested, with the project in place. The project would require an allowable exception to Code Section 148 for increased wind speed above 11 mph at one location on California St., noted above.

#### TRANSPORTATION (pp. 106 to 125)

A sidewalk detour and curb lane closure on the Kearny St. project frontage would be necessary during construction (about 24 months). Sidewalks on the project frontages along California and Sacramento Sts. would remain open during construction. Demolition and excavation (separate phases) would each generate an average of 10 truck trips per day. Construction truck traffic would not be permitted between 7 a.m. to 9 a.m. and 3:30 p.m. to 6 p.m. Construction traffic and closure of the curb lane on the west side of Kearny St. in front of the site would slow traffic, including Muni buses using Kearny St.

The project would generate about 5,095 net new person trips per day. About 725 new outbound trips would occur during the p.m. peak period, 450 of these during the p.m. peak hour.

The project would include about 232 independently accessible parking spaces (replacing the existing 269 valet spaces on site) and would result in a net decrease of about 37 spaces. The existing 269 spaces on the site are currently fully occupied. Eighty-two spaces would be long-term and 48 would be short-term; the remaining 102 spaces require Conditional Use authorization at which time the Planning Commission will also determine their status as short- and/or long-term spaces. Estimated equivalent net new daily parking demand from the project would be for about 190 equivalent daily spaces (in addition to the existing 269 spaces on site), resulting in an unmet parking demand as a result of the project of about 227 spaces (190-space net new project demand plus 269 existing spaces equals 459 minus 232 spaces with the project equals 227 spaces).

The proposed project would generate about 220 new pedestrian trips on the adjacent sidewalks during the noon 15-minute peak period and about 155 new pedestrian trips during the p.m. 15-minute peak period. Sidewalk operations, currently in the open, unimpeded and impeded ranges at locations adjacent to the project site during both the noon 15-minute peak period and p.m. 15-minute peak period, would remain in that range with the addition of the project to existing conditions; the project would cause existing conditions to worsen at four of the seven locations studied (from open to impeded at one, and unimpeded to impeded at three) in the noon hour peak and at two of the seven locations studied (both from unimpeded to impeded) during the p.m. peak hour.

The project would add about 170 outbound trips to Muni, 130 outbound trips to BART, and 95 new outbound trips to other transit agencies during the p.m. peak period in the year 2000. The project would generate an annual cost deficit to Muni of about \$42,340, which would be less than the project's contributions to the General Fund, the Transit Development Impact Fee, and sales tax revenues. The project would result in an annual net operating deficit to BART of about \$79,200. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

The EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984, available for review at the Department of City Planning, the main San Francisco library and various branch libraries) forecast employment and development in the downtown C-3 districts to the year 2000, and evaluated the impacts of this forecast employment and development. Project effects would fall within this forecast. The summary statements below, and those in the Impacts Chapter regarding cumulative development, are drawn from that EIR. The lengthy and detailed analysis presented in the prior EIR will not be repeated in this EIR for the 600 California St. project. The relevant material in the Downtown Plan EIR is summarized and incorporated by reference in the appropriate section of the EIR, by topic.

The transit demand from the project would represent about 0.2% of the total transit demand in the year 2000. Cumulative development under the Downtown Plan to the year 2000 in conjunction with planned capacity increases of transit carriers would be expected to cause the following changes in transit levels of service during the peak period: Muni Northwest Corridor, E to D; BART Transbay, F to E; AC Transit, C to D; Golden Gate Ferry, B to A; Tiburon Ferry, A to B; and Caltrain, B to C.

With cumulative development by the year 2000, sidewalk and crosswalk operations would be in the unimpeded and impeded ranges for all locations studied for the project (the project pedestrian traffic would represent between 12% and 42% of the pedestrian volumes).

Cumulative development, including that from the proposed project, by the year 2000 would be expected to decrease the existing peak-hour vehicle Level of Service (LOS) from C to D at the intersections of both Sacramento and Kearny Sts. and Clay and Battery Sts. and from B to C at Sacramento St. and Grant Ave. Project traffic alone would not cause the LOS at any of the intersections to change.

The project would represent about 0.3% of total outbound regional auto demand on major corridors (bridges and freeways) in the year 2000. The project percent would not be measurable against day-to-day fluctuations in traffic volumes.

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent about 0.3% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in the year 2000 if vehicular demand occurs as projected. Alternatively, if the goals of the Downtown Plan are achieved, total parking demand in the year 2000 would increase by about six percent over 1984 and there would not be a parking deficit.

The City Planning Code would require three loading spaces or their equivalent for the project, and the project would provide three loading spaces. Access (and egress) to (from) the truck loading docks would be on Sacramento St. A truck turntable would be provided which would allow trucks to completely turn around off street.

## AIR QUALITY (pp. 125 to 129)

Project-related vehicular traffic would add to cumulative regional pollutant emissions. Project-related traffic would contribute about one percent of total incremental emissions resulting from C-3 development projected in the Downtown Plan EIR. Emissions of total suspended particulates (TSP) generated by the project and cumulative development would increase TSP concentrations, which would increase the frequency of TSP standards violations in San Francisco, with concomitant health effects and reduced visibility.

Project emissions alone would not cause any standards to be violated. Currently, the eight-hour CO standard is estimated to be exceeded at the intersection of Battery and Clay Sts. However, local CO concentrations are predicted to be less in 2000 than in 1984, and would not violate the standards at Battery and Clay Sts., because the effects of emission controls on new vehicles would offset increases in traffic volumes and congestion.

#### CONSTRUCTION NOISE (pp. 129 to 132)

Project construction would take place over about 24 months, and would increase noise levels in surrounding areas. Highest average construction noise levels experienced in offices and stores near the site could interfere with speech. During excavation and exterior finishing, noise levels in the Nam Kue School and in residences in the project vicinity could reach as high as 76 dBA with windows open and 61 dBA with windows closed which could interfere with concentration. There would be no pile driving for the project.

#### EMPLOYMENT (pp. 132 to 136)

The project would accommodate about 847 net new employees in the C-3 District. There would be a net increase of about 798 office employees, a net increase of about 23 retail employees and a net increase of about 26 building maintenance/security employees.

About 2,000 additional jobs in the Bay Area would result from the employment multiplier effect of project operation. The project would require about 130 person-years of construction labor. About 227 additional person-years of employment would be generated in the Bay Area, as a result of the multiplier effect of project construction.

#### RESIDENCE PATTERNS AND HOUSING (pp. 136 to 137)

The Downtown Plan EIR analyzed the effects of the C-3 employment growth on future housing market conditions. With forecast C-3 district employment growth, there would be approximately 30,000 more C-3 district workers living in San Francisco. As a result of San Francisco's continuing high housing costs, some existing and new residents would pay more for the same quality housing, and others would end up with lower quality housing; many would allocate a larger share of their resources for housing.

C-3 district workers did not represent large percentages of the total number of employed residents of the other Bay Area Counties in 1980/1981, and these percentages are expected to be very similar, although somewhat larger, in 2000. Because C-3 district employment growth is one of many factors affecting future housing market conditions, and because the increased numbers of C-3 district employees residing outside of San Francisco, when considered in the regional context of employment growth, are not great, the City Planning Commission, in certifying the Downtown Plan EIR, did not find a significant impact on the region's housing supply as a result of cumulative downtown growth.

#### GROWTH INDUCEMENT (pp. 137 to 139)

Increases in downtown office space from the proposed project would contribute to growth of local and regional markets for housing, goods and services. Although employment growth would not be reflected directly in increases in demand for housing and City services to residents, it is expected that some downtown workers would want to live in San Francisco, intensifying the demand for housing, retail goods and services. The project would locate office and business service jobs historically located in this area, in the C-3-0 District. The project would be built in a developed urban area, and would require no expansion to the municipal infrastructure not already under consideration.

#### C. MITIGATION MEASURES

Major measures identified that would mitigate potentially significant environmental effects include the following:

#### MEASURES PROPOSED AS PART OF THE PROJECT

- During the construction period, construction truck movement would not be permitted between 7 a.m. to 9 a.m. and 3:30 p.m. to 6 p.m. to minimize peak-hour traffic conflicts and to accommodate queueing of Muni buses on Kearny St. prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic effects of lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent projects that are planned for construction or later become known.
- The project sponsor would contribute funds for maintaining and augmenting transportation service in an amount proportional to the demand created by the project, as provided by the Board of Supervisors Ordinance No. 224–81. Should said ordinance be declared invalid by the courts, the project sponsor has agreed to

participate in any subsequent equivalent mitigation measures adopted by the Planning Commission or the City in lieu thereof, which would apply to all projects similarly situated.

- The project sponsor would: 1) participate with other project sponsors and/or the San Francisco Parking authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.
- As recommended by the Environmental Protection Element of the San Francisco
   Master Plan, an analysis of noise reduction measures would be prepared by the
   project sponsor, and recommended noise insulation features would be included as part
   of the proposed building.
- The sponsor would hire an acoustical expert to monitor the interior noise levels of the Nam Kue School on one occasion, to determine which equipment would result in an interior noise level in excess of 55 dBA with windows closed; use of such equipment would be prohibited between 4 p.m. to 6 p.m. weekdays when classes are in session.

#### MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- Through San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP), PG&E could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place at off-peak hours and on weekends, and at the same time that the street would be opened for construction of the project.
- The City could implement the transportation improvements described in the Downtown Plan. Cumulative transportation impacts within San Francisco would be reduced by the improvements, and to the extent that San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, cumulative regional impacts caused by downtown growth would also be reduced.

#### D. ALTERNATIVES TO THE PROPOSED PROJECT

#### ALTERNATIVE A: NO PROJECT

This alternative would entail no change to the site. The proposed project would not be built there. The two existing buildings on the site, at 600 California St. and 551 Kearny St., would be retained, rather than demolished for the project.

This alternative could result in the development of other office space, possibly a high-rise building comparable to the project, at another location. Alternative development within the San Francisco downtown area would result in some of the same (or similar) impacts as described for the project. The effects of development would depend largely on the location chosen, and cannot be accurately determined. This alternative would preserve the option to develop a similar or different type of building on the site in the future.

#### ALTERNATIVE B: NO TRANSFER OF DEVELOPMENT RIGHTS, 9:1 FAR

This alternative considers a building without Transferred Development Rights (TDR), with an FAR of 9:1, the basic allowable FAR. This alternative would include about 223,500 gsf of office space (126,900 gsf net new), as compared to 312,700 gsf (216,100 gsf net new) for the project. Mechanical and storage space would be about 20,100 gsf, compared to 21,100 gsf for the project. Retail and parking space would be the same as for the project. Open space would be about 8,800 gsf compared to 10,400 for the project, in a rooftop terrace and in the galleria along California St. as for the proposed project. This alternative would satisfy all Downtown Plan requirements including on-site publicly visible art work, open space, and childcare. In design, the alternative would be bulkier in appearance than the proposed project, in part, because the project would be stepped. This alternative would be about 132-ft. tall or 112 ft. shorter than the project (244-ft. tall) at Kearny and California Sts. and would be 132-ft. tall at Kearny and Sacramento, or about six feet shorter than the project (138-ft.). This alternative would be of uniform height over the entire site. Shadow from this alternative would be about 46% shorter than that of the project from the California/Kearny portion of the building, and about four percent shorter than that of the project from the Kearny/Sacramento St. portion of the building. As the alternative would be eight stories shorter than the project at the California/Kearny portion of the building, it would be less visible.

Air quality, energy and transportation effects would be about 28% less than those of the project. The construction period would be shorter because the building would be smaller, and thus construction noise effects would also occur for a shorter period of time. Any effects on cultural resources would be similar to those of the proposed project. Wind effects from this alternative would be greater at 13 of the locations tested, the same at seven locations and less at two locations than the project. This alternative would provide employment for about 882 employees (509 net new employees), compared with about 1,220 employees (847 net new employees) for the proposed project.

#### ALTERNATIVE C: NO PARKING

This alternative would have no auto parking spaces; other uses, building dimensions and floor areas would be as for the project. However, because this alternative would have no parking, and thus, no parking that would exceed the seven percent allowed as accessory parking, the FAR would be less than the project, 10:1 compared to 11:1 with the project. The alternative would have one basement level, compared to three for the project.

The proposed project would reduce parking on the site by about 37 spaces. This alternative with no on-site parking would result in less traffic at local intersections. The unmet parking demand of the alternative would be 232 equivalent spaces greater than that of the project.

This alternative would have less potential for disturbance of any subsurface cultural resources, as one basement level would be needed for the new tower, rather than three. All other impacts of this alternative would be the same as those of the project.

# ALTERNATIVE D: NO EXCEPTION TO PLANNING CODE, SEPARATION OF TOWERS OR BULK REQUIREMENTS

This alternative would include setbacks above the base on the western, interior-of-block property line as called for in Section 132.1(c) Separation of Towers. The proposed project would intrude into the required 15-ft. setback by five feet where the mechanical core would be located on the western interior property line. This alternative would be set back 15 ft. from the western interior property line; the project would be set back ten ft. (at its nearest point) instead of the required 15 ft. from the western interior property line. This

alternative would meet all bulk requirements in the lower and upper towers and would include the required volume reduction in the upper tower. (The project would exceed all bulk requirements in the upper tower except maximum floor area, and would provide less than the required volume reduction in the upper tower).

This alternative would include about 317,500 sq. ft. of office, about 10,700 sq. ft. of open space (compared with 312,700 sq. ft., and 10,400 sq. ft., respectively, for the project) with the same amount of retail and parking space as the project. This alternative would have an FAR of 12:1 (compared to 11:1 for the project). This alternative would have a maximum height of 279 ft. at the southern portion of the building and 104 ft. at the northern portion of the building (compared to 244 ft. and 138 ft., respectively, for the project). Traffic, air quality and energy effects of this alternative would be about the same as those of the project. Shadow effects of this alternative would be greater than those of the project, as it would be 35 ft. taller than the project on California and Kearny Sts. Noise impacts and any impacts on cultural resources would be the same as for the project. Wind effects of this alternative would be greater at 14 of the locations tested, the same at three locations and less at five locations than the project. This alternative would provide employment for about 1,235 employees (862 net new employees) compared with about 1,220 employees (847 net new employees) for the proposed project.

# ALTERNATIVE E: BUILDING HEIGHT OF 50 FT. AT SACRAMENTO ST. WITH A 60-FT. DEEP SETBACK ABOVE

This alternative would be 50 ft. tall at Sacramento and Kearny stepping up to about 164 ft. tall, 60 ft. south of Sacramento St. along the Kearny St. frontage, then stepping up to about 244 ft. tall, 110 ft. from Sacramento St. The Sacramento St. frontage of this alternative would all be at a height of 50 ft. The project would be 138 ft. tall stepping up to 244 ft. tall, about 118 ft. south of Sacramento St. along the Kearny St. frontage. The project, in comparison, would step down from 138 ft. to 45 ft. about 85 ft. from Kearny St. along the Sacramento St. frontage; that is, about two-thirds of the Sacramento frontage would be 138 feet tall and one-third would be 45 feet tall.

This alternative would include about 319,800 sq. ft. of office, and about 10,100 sq. ft. of open space (compared with 312,700 sq. ft. and 10,400 sq. ft. respectively for the project). Retail space and other features of this alternative would be the same as for the project.

The FAR of this alternative would be about 12.0:1 compared to 11:1 for the project. This alternative would satisfy all Downtown plan requirements including on-site publicly visible art work, open space, and childcare, as would the project. Transportation, air quality, energy, noise and cultural resource effects would be about the same as for the project.

As noted above, the alternative design would include three steps along the Kearny St. frontage, instead of two with the project, and would maintain a lower height along Sacramento St. relating to the existing street wall height west and north of the site. Shadow effects would be similar to those of the proposed project. Wind effects of this alternative would be greater at 13 of the locations tested, the same at three locations and less at six locations than the project. This alternative would provide employment for about 1,240 employees (867 net new employees) compared with about 1,220 employees (847 net new employees) for the proposed project.

ALTERNATIVE F: PROVISION OF REQUIRED OPEN SPACE OFF-SITE, AT ST. MARY'S SQUARE

Under this alternative, the 8,020 gsf of required open space would be provided off-site through one of two options: (A) payment for improvement of an undeveloped L-shaped area over St. Mary's Square garage including a connection to Kearny St. or (B) an in-lieu payment for the expansion of St. Mary's Square. The proposed rooftop open space would not be built under (A) or (B). The 3,100 sq. ft. galleria along California St. would be credited toward the open space requirement of 8,020 gsf for (A). For (B) it would be part of the project but not part of the open space requirement.

Under this alternative, the mechanical penthouse in the southern tower would be 16 ft.-tall compared to 22 ft.-tall with the project. All other features of this alternative would be the same as those of the project. Traffic, air quality, energy, wind, noise and employment effects of this alternative would be about the same as for the project. Shadow effects would be slightly less than those of the project, as the mechanical penthouse would be 6 ft. shorter than the mechanical penthouse for the project. Impacts on cultural resources would be the same as for the project. Option B would provide greater pedestrian access than the proposed roof top open space or Option A; both would have one elevator access.

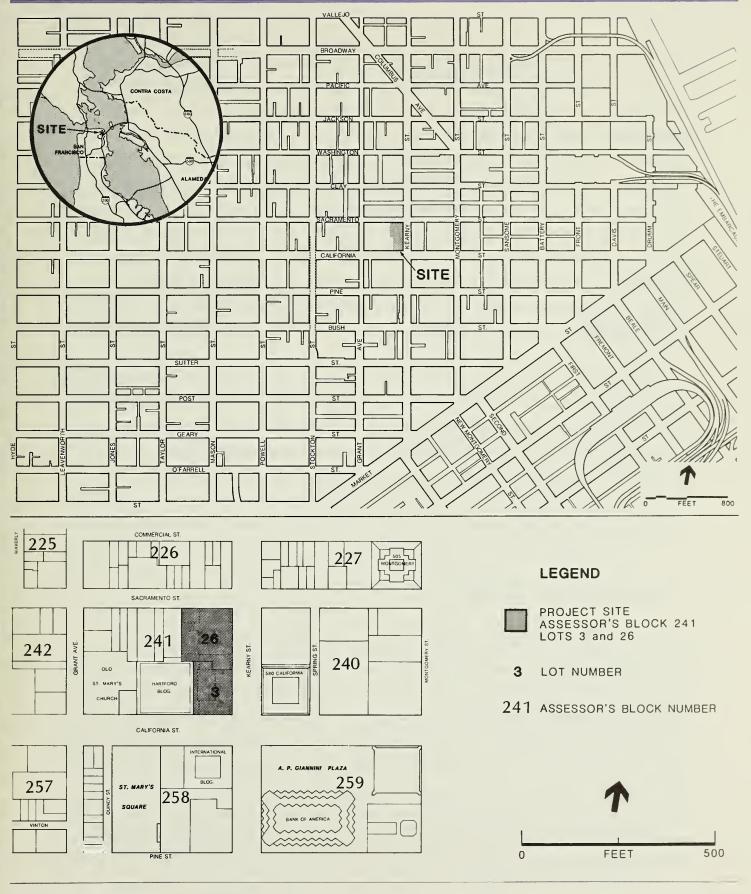
#### II. PROJECT DESCRIPTION

#### A. PROJECT SPONSOR'S OBJECTIVES

The Federal Home Loan Bank of San Francisco proposes to construct an office and retail building with three levels of subsurface parking, stepped down from 18-stories and 244-ft. at California and Kearny Sts. to nine-stories, 138 ft. at Sacramento and Kearny Sts. The Sacramento St. frontage would be stepped down from 138 ft. for two-thirds of its length to three-stories, 45 ft.-tall, along the western one-third of this frontage. The project architect is Kohn Pedersen Fox Associates of New York. The project sponsor's objectives are to develop high-quality office and retail space, provide replacement parking and alleviate existing space needs for its bank operations.

#### B. PROJECT LOCATION

The proposed project would be located at 600 California St., at the northwest corner of California and Kearny Sts. extending along Kearny St. to Sacramento St., in the City and County of San Francisco, on Lots 3 and 26 of Assessor's Block 241. The block is bounded by Sacramento St. on the north, California St. on the south, Kearny St. on the east and Grant Ave. on the west (see Figure 1, p. 19). The 31,822–sq.-ft. site fronts California St. on the south, Kearny St. for its entire length to Sacramento St. on the east, and Sacramento St. on the north. Adjacent to the western boundary of the site is the Hartford Building, and a two-story building. The site is west of the 580 California Building, diagonally across California St. from the Bank of America headquarters, north of the International Building, all high-rises, and south of two- and three-story buildings across Sacramento St. The project would replace the nine-story (plus basement) 600 California St. office building, including ground-level parking, and a two-story parking garage (cars are currently parked on three levels: ground floor, second floor and roof).



600 California Street Federal Home Loan Bank of San Francisco

FIGURE 1 PROJECT LOCATION

SOURCE: ESA

The site is in the C-3-0 (Downtown Office) Use district. The basic Floor Area Ratio (FAR) is 9:1. The 250-S Height and Bulk District for the site allows a maximum height of 291 ft., including an optional upper tower extension of 10% of building height and a 16-foot-high mechanical penthouse. The S-bulk controls apply to four parts of a new building: base, lower tower, upper tower and upper tower extension. The general principle is reduced bulk with increased height. In the S district, the maximum length and maximum diagonal dimensions of the lower tower are 160 ft. and 190 ft., respectively. The maximum average floor size for the lower tower is 17,000 sq. ft., and the maximum floor size is 20,000 sq. ft. For the upper tower, the bulk controls are: a maximum length of 130 ft., a maximum average diagonal measure of 160 ft., a maximum average floor size of 12,000 sq. ft., and a maximum floor size of 17,000 sq. ft. Allowable exceptions to these bulk maximums are provided in Sections 270 and 272 of the Planning Code, subject to approval under Section 309.

The project would require an exception from the required 15 ft. setback from interior property lines, or center of street specified in Planning Code Section 132.1(c) Separation of Towers. Exception to the setback requirement could be permitted in accordance with the provisions of Section 309 under Section 132.1 subsection (c)2A and (c)2B. The project would require exceptions in accordance with the provisions of Section 309 under Sections 270 and 272 Bulk Limits to exceed the maximum diagonal and length dimensions, the maximum average floor area, and the volume reduction, all in the upper tower.

#### C. PROJECT CHARACTERISTICS

Project characteristics are summarized in Table 1. The project would be a two part structure with a higher tower (southern) portion at California and Kearny Sts. and a lower (northern) portion at Sacramento and Kearny Sts. It would step in two parts along both the Kearny St. and the Sacramento St. frontage. The proposed building would step down from about 244 ft., 18-stories at the corner of California and Kearny Sts., to 138 ft., nine stories (including a 19 ft.-tall screen which would enclose mechanical equipment) at the corner of Sacramento and Kearny Sts; three subsurface parking levels would underlie the entire building. A 22-ft., above 244 ft., mechanical penthouse would cover about 21% (of the western portion) of the southern tower, adjacent to the Hartford Building; thus the project would have a maximum height of 266 ft. From the corner of Kearny St. the

#### NUMBER OF STORIES OF NEW CONSTRUCTION

## HEIGHT AND BULK MEASUREMENTS (ft.) AND FAR

Allowah	le
Under D	TP

	Stories		Under DTP Planning Code	Proposed Project
Retail/Lobby/		Height	250 /b/	266 /b/
Truck Loading	1	Length (lower tower):	160	155
Parking (Subsurface)	3 /a/	Diagonal (lower tower):	190	170
Office	<u>17</u>	Length (upper tower):	130	155
Total Above	18	Diagonal (upper tower):	160	170
Ground Stories		Volume Reduction:	10% /c/	5%

Basic FAR of 9:1

SITE SIZE: 31,822 sq. ft.

TDR/d/ up to 18:1 FAR: 11:1/d/

#### PROPOSED PROJECT

I KOI OBED I ROJECI	
Area Applicable	Total Gross
To FAR (gsf)	Floor Area (gsf)
39,300 /e/	90,600 /g/
0 /f/	17,400 /h/
312,700	312,700
0 /f/	10,500
0/f/	21,100
352,000 /e/	452,300
	Area Applicable To FAR (gsf)  39,300 /e/  0 /f/ 312,700 0 /f/ 0 /f/

<sup>/</sup>a/ These three stories are subsurface parking levels and are excluded from the above grade stories.

/f/ In Section 102.8(b)1-16: exclusions from gross floor area in the C-3-0 district are defined. Examples are convenience, retail and personal service and pedestrian circulation and building service space located on the ground-floor and mezzanine levels (not to exceed 75% of ground-floor interior and open space areas), and mechanical and building storage space.

/g/ With entry and exit ramps excluded, there would be 78,300 gsf of parking space.
/h/ The project would include about 7,900 gross sq. ft. of retail space on the ground floor. Other space noted would include elevator core and storage.

SOURCE: Environmental Science Associates, Inc., and Kohn Pedersen Fox Associates

<sup>/</sup>b/ The project site is located in a 250-S Height and Bulk District. Under Planning Code Section 263.5, additional height of up to ten percent (to 275 ft.) may be allowed, provided the volume of the upper tower extension (above 250 ft.) is reduced. In addition, a 16-ft.-high mechanical penthouse is allowed above 275 ft. in height by Section 260.b.l.(A). The project would include a 22-ft. mechanical penthouse on a portion of the southern tower; that is, it would be 266 ft. tall at its highest point and therefore would be below the maximum allowable (291 ft.).

<sup>/</sup>c/ The volume reduction applies above 160 ft.; 10% is the minimum required.
/d/ To permit the FAR on the development site to exceed 9:1, about 65,700 gsf of transferable development rights (TDR) would be transferred from as yet unidentified site(s), under Section 128 of the City Planning Code. The Floor Area Ratio (FAR) of the combined development and preservation lots would be less than, or equal to, 9:1.
/e/ Under Section 204.5(c) of the Code, parking area up to seven percent of the gross floor area of the building may be considered accessory parking (24,600 gsf in this case); parking area in excess of seven percent would not, and would be applicable to the FAR. Also, replacement short-term parking may be excluded from the FAR (allowable Section 102.8 (b) 16 pursuant to Section 309) in this case 48, spaces (14,400 gsf); therefore, total parking excluded from the FAR calculation would be 39,000 gsf (24,600 + 14,400 = 39,000 gsf).

Sacramento St. frontage would step down from 138-ft., nine-stories tall (for about two-thirds, or about 85 ft., of the Sacramento St. frontage) to 45 ft., three-stories tall (for about one-third, or about 45 ft., of the Sacramento St. frontage).

As calculated under the Planning Code, the building would contain about 352,000 gross sq. ft. of floor area; the gross floor area would include the office area, and that part of the proposed parking area in excess of the seven percent of the gross floor area of the building permitted as an accessory use and that part in excess of the 48 replacement short-term spaces. (Exclusion of short-term parking area in excess of seven percent of the floor area from the FAR calculation assumes that it would be replacement of short-term parking, which may be required at the discretion of the Planning Commission pursuant to Section 309. Project parking would be about 21% of the gross floor area of the building.) This would result in a Floor Area Ratio (FAR), the ratio of the gross floor area of all buildings on site (excluding retail, parking not in excess of seven percent of gross floor area, replacement short-term parking, and mechanical space, not counted as gross floor area) to site size, of about 11:1 for the 31,822-sq.-ft. development site. There would be a lobby, a galleria open to California St. (connecting to the existing Hartford Building Plaza), retail area, service loading and mechanical space on the ground floor. The project would include about 10,400 gross sq. ft. of open space, 7,300 sq. ft. contained on a rooftop terrace and 3,100 sq. ft. in the galleria of the 18-story (southern) portion of the building along California St. Three subsurface parking levels would contain about 232 independently accessible parking spaces (48 short-term, 82 long-term and 102 yet to be determined as long- and/or short-term) and entry and exit ramps. Access to three at-grade truck loading docks and the three subsurface parking levels would be on Sacramento St. The loading area would include a truck turntable within the building which would allow trucks to completely turn around off street and exit onto Sacramento St. Cars would exit the three subsurface parking levels onto Kearny St. Pedestrian access to the building would be from California and Kearny Sts.

Floors two through eighteen at California and Kearny Sts. would be office (including some mechanical space), with a mechanical penthouse above; floors two through nine at Sacramento and Kearny Sts. would contain office and some mechanical space with a 19-ft. screen above, enclosing mechanical equipment.

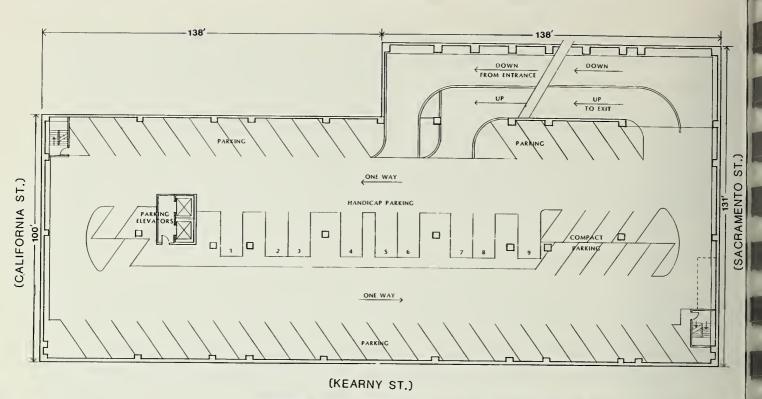
The base, as defined by the Downtown Plan, is the height equal to 1.25 times the width of the widest abutting street (California St.) or about 106 ft. for the project (height above grade as measured from the center of the project frontage along California St.). The base would include floors one through nine (for both north and south towers). The lower tower would be floors ten to 13 which would contain an average floor size of about 13,190 sq. ft. (south tower). The upper tower would begin at the 14th floor (south tower). The average floor size in the upper tower (south tower) would be about 12,740 sq. ft. The project would include a five percent reduction of volume in the upper tower (south tower).

Floor plans and elevations are shown in Figures 2 to 8, pp. 24 to 30.

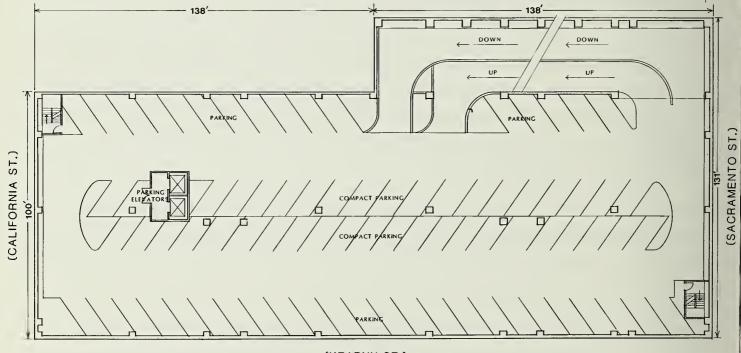
The building would include about 312,700 gross sq. ft. of office space, 7,900 gross sq. ft. of retail space, 21,100 gross sq. ft. of mechanical and storage space, 10,400 gross sq. ft. of open space, and about 90,600 gross sq. ft. of parking space (232 spaces and entry and exit ramps), and three truck loading docks. Total net changes in floor area for the site would be a net increase of about 216,100 sq. ft. of office (the 600 California St. building, and the Hertz rent-a-car office, both to be demolished contain, about 96,600 sq. ft. of office space. Thus 312,700-96,600 = 216,100 gsf, a net increase of 7,900 sq. ft. of retail and a net increase of about 22,200 sq. ft. of parking area (90,600 - 68,400 = 22,200), with a net decrease of 37 parking spaces. (The increase in parking area but decrease in the number of spaces is due to the change from valet to independently accessible spaces and the inherent inefficiency of newer high-rise buildings, such as the project, with large building cores and increased ramp and maneuvering space as compared with the existing parking structure at 551 Kearny.)

The project would use about 65,700 gross sq. ft. of transferred development rights (TDR). The project sponsor has not yet identified a building or buildings from which development rights would be sought. The overall FAR for the development and preservation lots would be 9:1, or less.

The project would incorporate art as required by the Downtown Plan and Planning Code; provide a total of 10,400 sq. ft. of required open space on site in the form of a rooftop terrace (7,300 sq. ft.), with benches and landscaping, on the 18-story portion of the building and (3,100 sq. ft.) in a galleria along California St.; and meet the childcare requirement in a manner to be determined.



# FIRST BASEMENT LEVEL PLAN (HIGHEST LEVEL)



(KEARNY ST.)

SECOND AND THIRD BASEMENT LEVEL PLAN



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Kohn Pedersen Fox Associates

FIGURE 2 FIRST, SECOND AND THIRD BASEMENT LEVEL PLANS

FIGURE 3

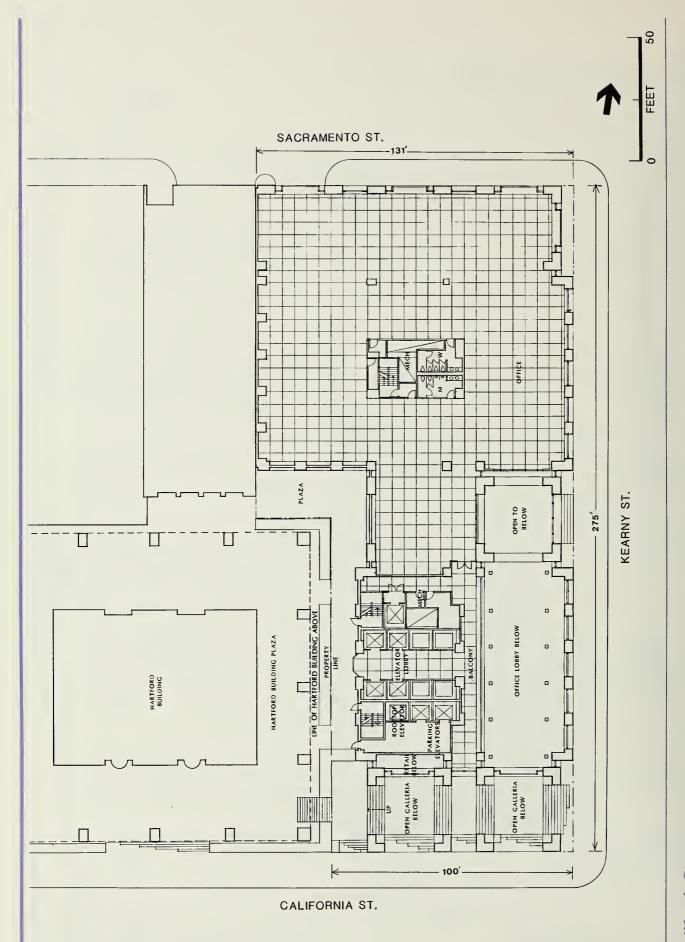
Federal Home Loan Bank of San Francisco

600 California Street

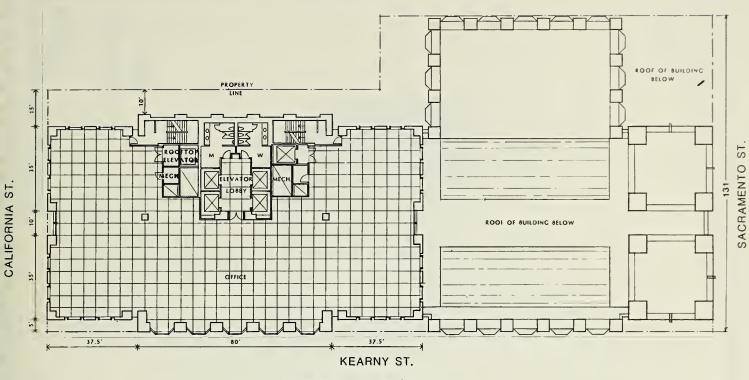
SOURCE: Kohn Pedersen Fox Associates

GROUND FLOOR PLAN

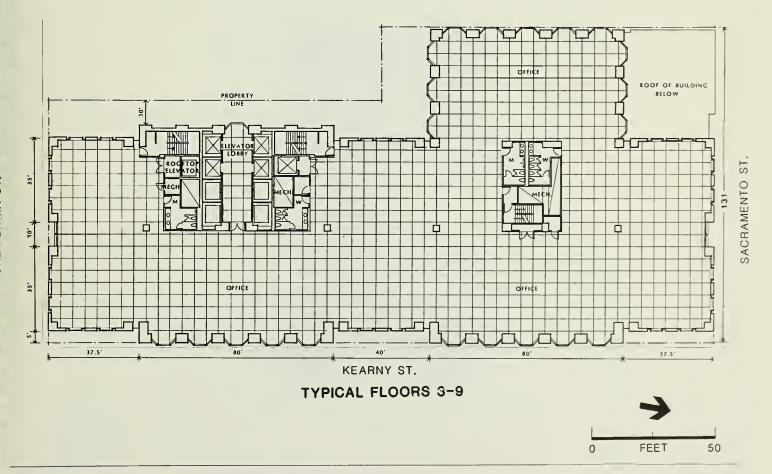
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600 California Street Federal Home Loan Bank of San Francisco



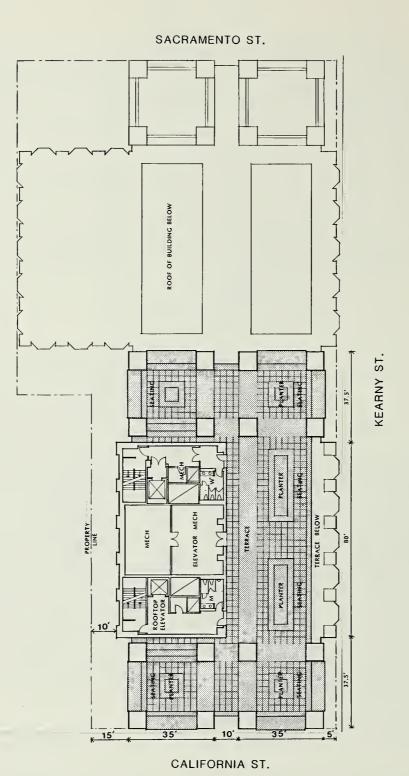
# TYPICAL FLOORS 10-18

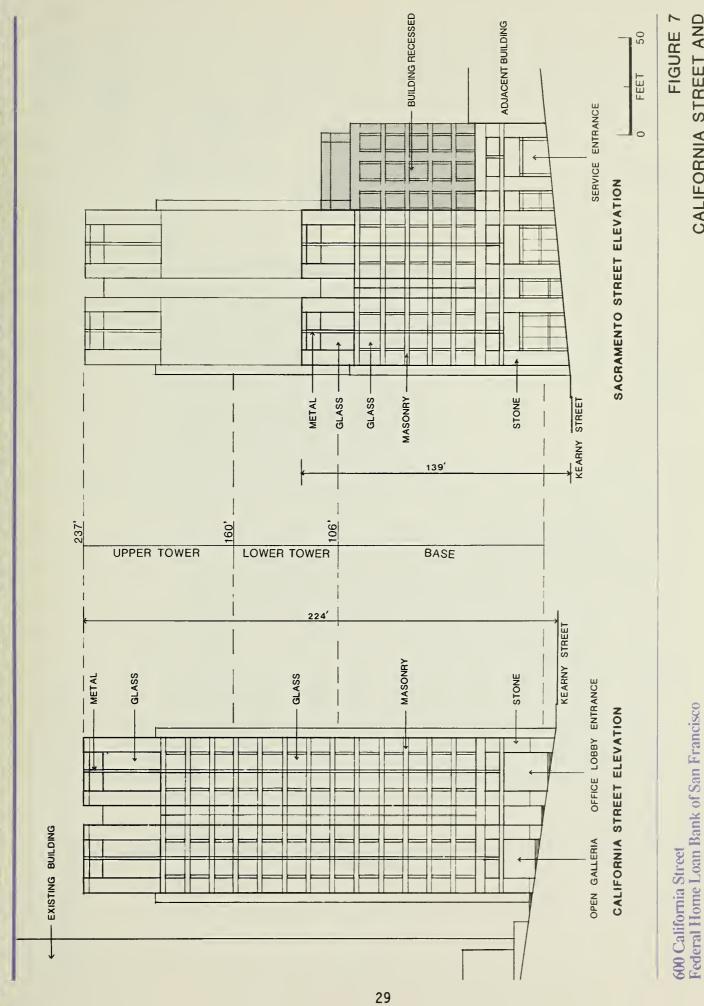


600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Kohn Pedersen Fox Associates

FIGURE 5
TYPICAL LOWER AND UPPER
OFFICE FLOOR PLANS



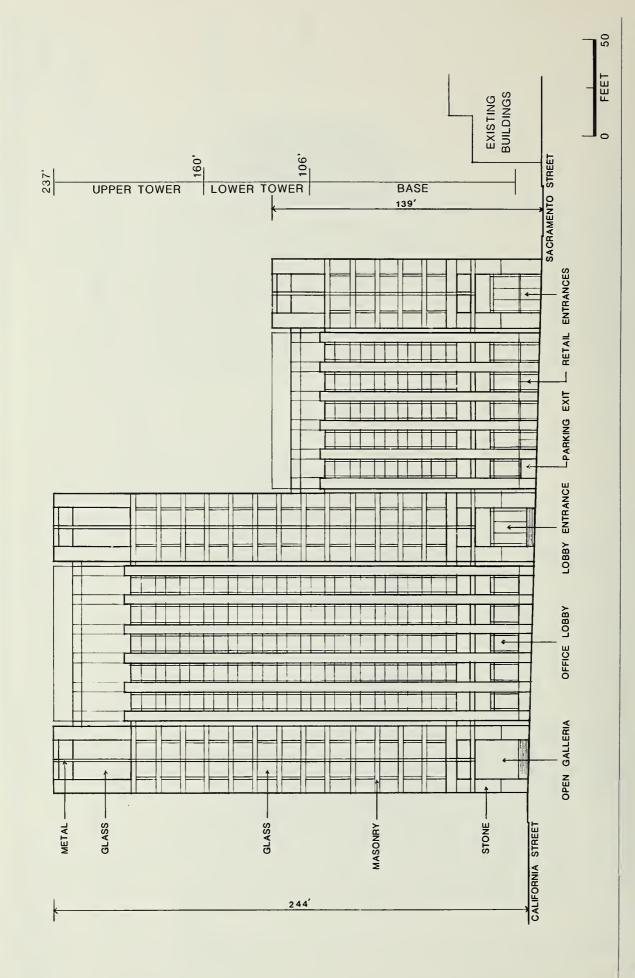


CALIFORNIA STREET AND

SACRAMENTO STREET ELEVATIONS

SOURCE: Kohn Pedersen Fox Associates





The project would be built to the property lines to a height of about 138 ft. on the northeastern portion of the building, (Kearny and Sacramento Sts.) to a height of 45 ft. on the northwestern corner of the building (on Sacramento St.) and to a height of 244 ft. on the southern portion of the building (California and Kearny Sts.). The southern portion of the building, would be set back ten ft. from the interior property line (where the mechanical core would be located) on the west, and by about 15 ft. from the rest of this interior property line adjacent to the Hartford Building; the northern portion of the building would be built to the (western) interior property line (see p. 67, in the Zoning section, which describes exceptions to the Separation of Towers setback requirement). The northern tower would be 138 ft.-tall for 85 ft. (or about two-thirds) and 45 ft.-tall for 45 ft. (or about one-third) of the Sacramento St. site frontage, and would be 138 ft.-tall extending south on Kearny to about 118 ft. from Sacramento St. The south tower of the building would be 244 ft.-tall at the corner of California and Kearny Sts. along the 100 ft. California frontage and extending about 157 ft. north, toward Sacramento St. The project, including both towers, would occupy the full 275 ft. frontage of Kearny between California and Sacramento Sts. Above about 138 ft., the southern tower would continue without setback to a height of 244 ft. A mechanical penthouse would occupy about 21% of the south tower roof adjacent to the Hartford Building for a maximum building height of 266 ft.

Both towers would have a three-part vertical composition; the architectural base (ground-floor, second and third floors); a middle shaft (floors four through 15 in the southern tower and floors four through six in the northern tower); and a top (levels 16 through 18 and a mechanical penthouse on the southern tower and levels seven through nine in the northern tower and a screen enclosing mechanical equipment). The three-story architectural base element would have one double-height rectangular opening along Kearny St., and three along California St. to provide pedestrian access to the double height galleria along California St. Between the openings would be single-height entrances at ground-level to the office lobby and retail areas, with recessed windows above the entrances extending up to the second and third floors. The architectural base element would be defined by a projecting cornice line on the California, Kearny and Sacramento St. faces. Bay windows and projecting piers clad in light-colored masonry would extend vertically between the base cornice line, extending the full building height, intended to complement the facades of larger, older development in the Financial district.

## D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS

#### **SCHEDULE**

The project sponsor expects environmental review, project review and detailed design to be completed in early to mid 1987. If the project were approved and building permits issued, demolition and construction would take about 24 months. Construction periods are projected as follows:/1/

Demolition/Excavation/Shoring	32 weeks
Foundations	4 weeks
Steel Erection	12 weeks
Exterior Finishing	48 weeks

Initial occupancy would occur about 24 months from the start of demolition.

#### **COST**

Estimated construction cost of the project would be about \$48 million, including demolition, excavation, building shell and interior improvements. Replacement cost for the entire building, including architectural and engineering fees, and tenant improvements, would be about \$65 million. Office space is expected to rent for approximately \$25 to \$35 per sq. ft. per year. Retail space is expected to rent for approximately \$40 to \$50 per sq. ft. per year. (All figures are in 1986 dollars)/2/.

## APPROVAL REQUIREMENTS

Following a public hearing before the City Planning Commission on the Draft EIR, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the City Planning Commission for certification. No permits may be issued before the Final EIR is certified.

The Downtown Plan was adopted and proposed amendments to the City Planning Code to implement it (Permanent Controls) were approved by the City Planning Commission on November 29, 1984 (Resolution No. 10165). The proposed amendments were acted on by the Board of Supervisors and signed by the Mayor, in September 1985, and became effective October 17, 1985.

The Office Growth Limitation Ordinance (Ordinance No. 414-85 approved September 10, 1985 by the Board of Supervisors, signed by the Mayor September 17, 1985, and effective October 17, 1985) limits growth in the form of major office developments (over 50,000 sq. ft.) in San Francisco to a total of 2.85 million sq. ft. over a period of three years (an average of 950,000 sq. ft. per year). This includes development citywide and encompasses development by the Redevelopment Agency, the Port of San Francisco, and State and Federal agencies. In accord with the ordinance, the project would be subject to review and approval under Planning Code Section 321, Office Development: Limits. About 216,100 sq. ft., the amount of net new office space in the proposed building, would count against the total allowable 2.85 million sq. ft.

Under Planning Code Section 309, Permit Review in the C-3 Districts, the project would require exceptions to separation of towers requirements (allowable under Section 132.1(c)2A and (c)2B), bulk limits (allowable under Section 272(a) 1,3,4 and 5), and to exceed the pedestrian wind comfort criteria at one location on California St. (allowable under Section 148(a)).

The project would require an exception, in accordance with the provisions of Section 309, for causing violations of the pedestrian wind comform criteria, as may be allowed under Section 148(a).

There are currently 221 long-term and 48 short-term spaces on site or 269 spaces. A total of 232 spaces are proposed. The project would require Conditional Use authorization (City Planning Code Section 204.5(c)) for parking in excess of the seven percent of the gross floor area of the building permitted as an accessory use and in excess of the proposed replacement short-term spaces allowable under City Planning Code Section 102.8(b) 16 (about 39,000 gsf could be permitted as an accessory use and replacement short-term parking; 78,300 gsf is proposed, excluding ramps. The exclusion of the 48 proposed replacement short-term spaces (about 14,400 gsf) and the allowable seven percent (82 spaces proposed as long-term spaces) of the gross floor area (about 24.600 gsf) would result in an excess of 39,300 gsf, or 102 parking spaces, which would be subject to Conditional Use authorization by the City Planning Commission, which would also determine the number of spaces which would be long- and/or short-term. (The proposed 48 replacement short-term spaces would be part of the Conditional Use application if not approved by the Planning Commission. The project would not comform to Section 155(g)

which requires that parking spaces in the C-3 district shall maintain a rate structure that encourages short-term use and discourages all-day parking. No exception is allowable under Section 309. The project sponsor has requested an opinion from the Zoning Administrator as to whether a long-term rate structure could be allowed (for the proposed long-term spaces) under the Variance process.

The City Planning Commission would hold a public hearing to consider the project application under Sections 309 and 321, including requests for exceptions under Section 309(e) and would adopt a motion approving, approving with conditions, or disapproving the project./3/ If the project were approved by the City Planning Commission, the project sponsor must obtain demolition, building, and related permits from the Central Permit Bureau of the Department of Public Works. An application for a Site Permit for the project has not yet been filed.

## NOTES - Project Description

- /1/ Mike Ford, Swinerton & Walberg Co., letter, May 7, 1986, on file at the Department of City Planning, 450 McAllister St., San Francisco, Ca.
- /2/ Ray Terwilliger, Federal Home Loan Bank of San Francisco, letter, September 15, 1986, on file with the Department of City Planning, 450 McAllister St., San Francisco, Ca.
- /3/ The Planning Code (Section 309(h)) requires a public hearing before the City Planning Commission for all office and hotel projects exceeding 50,000 sq. ft. of net new area.

### III. ENVIRONMENTAL SETTING

### A. LAND USE AND ZONING

#### LAND USE

The project site extends along the west side of Kearny St. from its intersection with California St. to Sacramento St. The 34-story Hartford Building, fronting on California St., and a two-story office building fronting on Sacramento St., abut the site on the west. Directly east of the site, across Kearny St., is the 580 California St. office building, completed in 1983; and the 550 Kearny St. office building. Diagonally across Kearny and California Sts. from the site is the 52-story Bank of America Headquarters Building; directly south of the site, across California St., is the 22-story International Building. Directly north of the site, across Sacramento St., are four, two-to three-story buildings, which generally contain ground-floor retail uses with office space above.

The project area is characterized by a mix of low- and high-rise commercial buildings, generally to the south, west, and east; and low- and mid-rise buildings including commercial, institutional and residential buildings to the north and northwest.

The project site is in an area where high-rise office buildings of the Financial District meet low-rise commercial and residential buildings of Chinatown. Land use to the south, east and west in the site vicinity consists predominantly of high-rise office buildings, many of which are related to banking, finance and commerce with some ground-level retail uses interspersed with some lower buildings. Land use to the north and northwest consists primarily of low- and mid-rise commercial buildings characteristic of Chinatown, which is north and west of the site.

As noted, neighboring buildings to the south, east and west are newer high-rise high intensity office buildings in the financial district, including the Bank of America Building, the recently completed 580 California St. Building, the Hartford Building and the International Building. There are four low-rise buildings (three-stories) located north of

the site across Sacramento St. The buildings south, and east in the immediate site vicinity range in height from about 325 ft. (International Building) to 780 ft. (Bank of America). Most of the buildings north and west of the site are low- to mid-rise and range in heights from about 35 to 45 ft. Buildings under construction, or recently constructed, in the project area include the 325 ft., 505 Montgomery building, under construction one block northeast of the project site; one block east of the project block, the 378 ft.-tall, 456 Montgomery St. building is nearing completion; east on that same block, is the location of the proposed 343 Sansome St. building, which is under formal environmental review by the Department of City Planning. The 456 Montgomery St. building incorporates the facades of two 1908 low-rise buildings into a tower. The 343 Sansome St. development would incorporate two facades of an existing 1930 mid-rise building into a new tower.

The site is occupied by two buildings: a nine-story office building, 600 California St., and a two-story, three-level parking garage, 551 Kearny St. (see Figures 9-12, pp. 37 to 40). Both structures on the site are built to lot lines. Uses on the site include a total of about 96,600 sq. ft. of office space, 95,800 occupied by the Federal Home Loan Bank of San Francisco with 29 ground floor parking spaces, about 240 parking spaces in the garage, and a 800 sq. ft. rent-a-car office, 533 Kearny St. Businesses at the site employ about 373 persons.

Uses on the project block are mixed. West of the site is the Hartford Building, containing office uses. West of the Hartford Building, at the corner of California St. and Grant Ave. in Chinatown, is St. Mary's Church and adjacent to the Church, toward the site, is St. Mary's Parish House. North of St. Mary's, along the east side of Grant Ave. and along the south side of Sacramento St., east side of Grant Ave., are several two-to-four story buildings containing retail uses on the ground floor, generally with residential uses above. The two-story Nam Kue School, is located at 755 Sacramento St. one-half block east of the site. Office uses and ground floor retail uses generally occupy buildings in the area south and east of the site. Uses along both sides of California St., from the Hartford Building adjacent to the site, east as far as the intersection of Sansome St. with California St., are generally high-density office uses with banking uses often occurring on the ground floors (see Figure 13, p. 42).

Ground floor retail uses generally occupy buildings on blocks north and west of the site in Chinatown. Uses along Clay, Sacramento and Commercial Sts., on blocks north of the



EXISTING 600 CALIFORNIA ST. (to be demolished)

Federal Home Loan Bank of San Francisco 600 California Street

SOURCE: ESA



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

FIGURE 1
VIEW OF SITE NORTHWEST FROM
CALIFORNIA/KEARNY INTERSECTION
(A.P. GIANNINI PLAZA

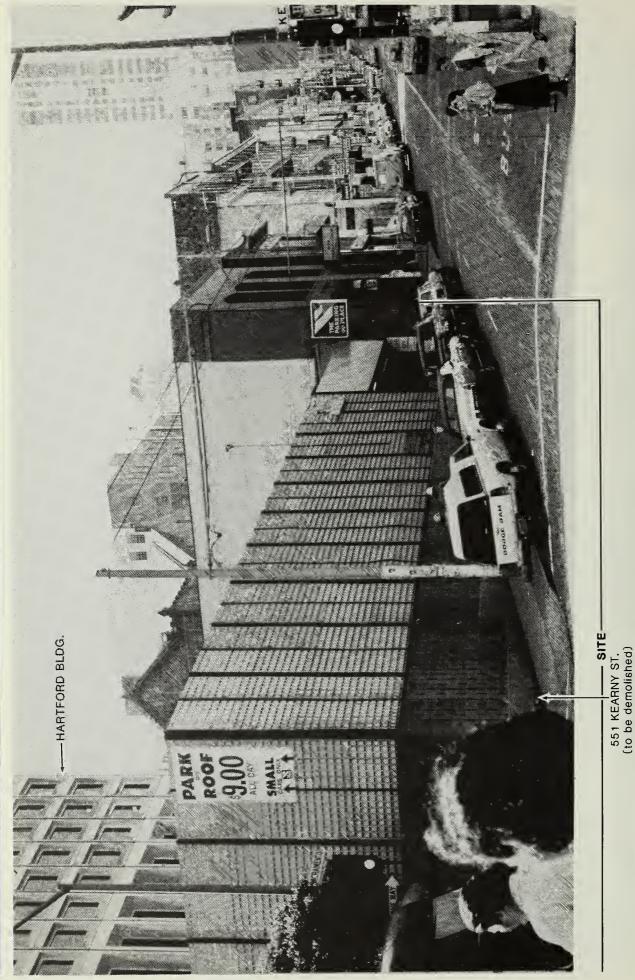
FIGURE 11

- HARTFORD BLDG.

3 A

SOURCE: ESA

FIGURE 12



600 California Street Federal Home Loan Bank of San Francisco

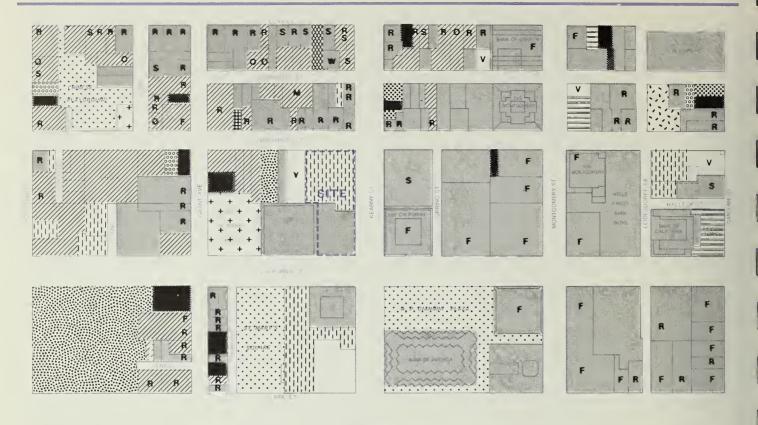
site, include small-scale retail businesses such as restaurants, grocery stores and small retail shops. Along Grant Ave. and Stockton St., between Pine and Clay Sts., retail businesses are generally specialty stores catering to tourists and retail food stores serving residents of Chinatown. Grant Ave. and Stockton St. are the main north-south retail/commercial streets in Chinatown. Generally in Chinatown, second floor uses are either residential, as along Commercial St. and Waverly Pl. one block north and one block northwest, respectively, of the site, and as along the eastern side of Stockton St. between California and Clay Sts., about one and one-half block west of the site; or small business offices such as travel agencies, doctors' and dentists' offices, and headquarters offices for clubs and organizations catering to residents of Chinatown, such as those along Grant Ave., and Kearny, Clay, and Sacramento Sts.

The nearest open space in the site vicinity is A.P. Giannini Plaza, part of the Bank of America headquarters building, located diagonally across California St. from the project site. St. Mary's Square is southwest of the site in the block bounded by Kearny and Grant, through the block between California and Pine Sts. Portsmouth Square is two blocks north of the site between Kearny St. and Brenham and Washington and Clay Sts. The Chinese Playground is located about one block west of the site on Sacramento St. between Stockton and Grant Sts.

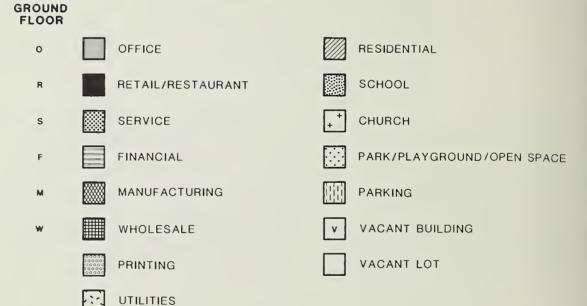
## ZONING

The project site is within the area of the Downtown Plan, regulated by implementing sections of the Planning Code. (The EIR prepared for the Downtown Plan was certified on October 18, 1984. The Downtown Plan and related amendments to the San Francisco Master Plan were approved and adopted by the City Planning Commission on November 29, 1984. The Board of Supervisors approved the Downtown Plan and implementing ordinances on September 10, 1985. The ordinances were signed by the Mayor on September 17, 1985, and took effect October 17, 1985.)

As noted on p. 33, the Office Growth Limitation Ordinance limits growth of major office development (over 50,000 sq. ft.) to a total of 2.85 million sq. ft. over a three-year period (an average of 950,000 sq. ft. per year). This includes development citywide and encompasses development by the Redevelopment Agency, the Port of San Francisco and State and Federal agencies. Section 321 of the Planning Code implements this ordinance.



## **LEGEND**





600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

FIGURE 13
LAND USE
IN THE PROJECT VICINITY

The site is in the C-3-O (Downtown Office) use district (see Figure 14, p. 44). Office and retail are primary permitted uses in this zoning district. Development is allowable with a basic Floor Area Ratio (FAR) of 9:1. Development greater than the basic 9:1 FAR, up to a maximum 18:1 FAR, is allowable through transfer of development rights (TDR) from sites, in the same zoning district, that include architecturally significant buildings with unused potential floor area. All unused area applicable to the FAR of the preservation site may be transferred to a development lot in the same C-3 zoning district, subject to setback, sunlight access, separation between towers and any other limitations pursuant to Planning Code Section 309, Permit Review in the C-3 Districts.

The site is in a 250-S Height and Bulk district, in which the maximum allowable height is 250 ft. (see Figure 14, p. 44). Ten percent of permitted building height may be allowed above the height limit, pursuant to the provisions of Section 309, upon further reduction in the volume of the upper portion of the tower (that is, up to 275 ft.). An additional height of up to 16 ft. is allowable for a mechanical penthouse. Thus, in the 250-S District, the maximum allowable height is 291 ft. In the S Bulk District, the maximum length and maximum diagonal dimensions of the lower tower are 160 ft. and 190 ft., respectively. The maximum average floor size is 17,000 sq. ft.; the maximum floor size is 20,000 sq. ft. For the upper tower the bulk controls are: a maximum length of 130 ft.; a maximum diagonal dimension of 160 ft.; a maximum average floor size of 12,000 sq. ft.; and a maximum floor size of 17,000 sq. ft. Allowable exceptions to these bulk maximums are provided for in Section 270 and 272, subject to approval under Section 309.

Off-street parking is not required for commercial uses in the C-3-O district, and long-term parking is discouraged. According to Section 204.5(c) of the Planning Code, up to seven percent of the gross floor area of a building may be devoted to parking as an accessory use when no parking is required. This area is not counted as part of the FAR. In C-3 districts, off-street loading and service vehicle spaces are required as follows: 0.1 spaces per 10,000 sq. ft. of office (to closest whole number); no spaces are required for less than 10,000 gross sq. ft. of retail (Planning Code, Section 152.5, Table 5.5).

Open space is required for commercial uses in the C-3-0 District in a 1:50 ratio of open space to uses with open space requirements, as per Section 138(a) and (b) of the Planning Code; and contribution of \$2.00 for each net new gross sq. ft. of office to the Downtown Park Fund (Section 139(d)). The open space provided must meet minimum standards as defined by Section 138(d) of the Code.

RESIDENTIAL-COMMERCIAL COMBINED, HIGH DENSITY DISTRICT

DOWNTOWN GENERAL COMMERCIAL DISTRICT

DOWNTOWN OFFICE DISTRICT

LEGEND

0.30 0.30 C-3-R

C-3-R

DOWNTOWN RETAIL DISTRICT COMMUNITY BUSINESS DISTRICT

PUBLIC USE DISTRICT

TNA 95

CHINATOWN RESIDENTIAL/NEIGHBORHOOD COMMERCIAL

CHINATOWN VISITOR RETAIL (interim controls)

(interim controls)

600 California Street

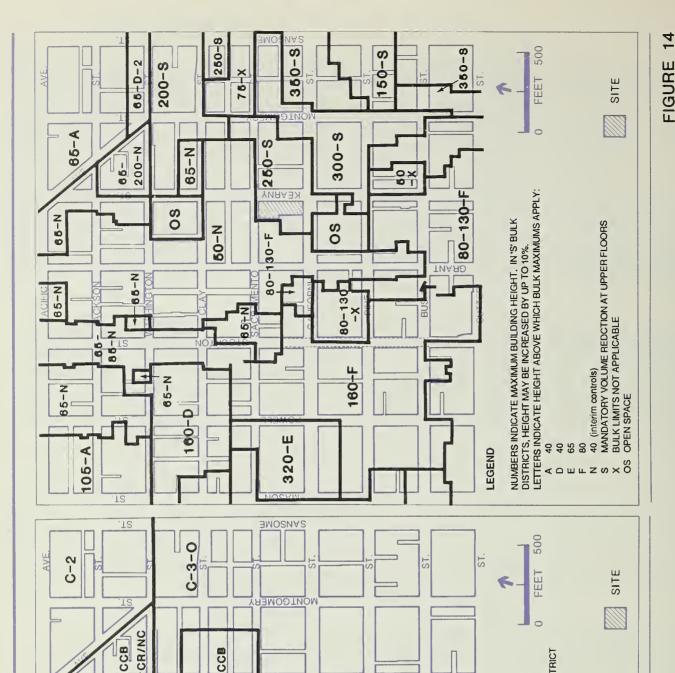
RESIDENTIAL MIXED, HIGH DENSITY DISTRICT CHINATOWN COMMUNITY BUSINESS (interim controls)

RESIDENTIAL MIXED, MEDIUM DENSITY DISTRICT

RM-3 88

RESIDENTIAL THREE-FAMILY HOUSE DISTRICT

USE DISTRICTS



CCB

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CVR

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RM-

S

Z 4

RM-4

ZY

RH-3

CR/NC

KEARNY

NOSAM

0

C-3-G

**RM-4** 

CCB

Under Section 149 of the Planning Code, one percent of the construction cost of a commercial development in the C-3-0 District must be devoted to publicly accessible works of art; additionally, on-site child care facilities, or in-lieu fees are required for commercial development which exceeds 100,000 gross sq. ft. in a C-3-0 district (Section 165 of the Code).

Zoning in the site vicinity includes a variety of use districts as shown in Figure 14, p. 44. The C-3-O (Downtown Office) use district is east of and includes the site; St. Mary's Square, south of the site, is zoned P (Public Use). Chinatown Interim Controls regulate the area north and east of the site and include, closest to the site, CCB (Chinatown Community Business), CR/NC (Chinatown Residential/Neighborhood Commercial), and CVR (Chinatown Visitor Retail).

The area subject to the Chinatown interim controls is within the Chinatown Plan study area. The Chinatown Plan is proposed as an area plan within the City's Master Plan. Goals of this area plan include protecting existing economic, social and cultural diversity; preserving existing housing and encouraging development of new affordable housing; protecting and facilitating the expansion of service and neighborhood serving retail activities; and preserving existing amenities and improving neighborhood livability.

Recognizing the potential for encroachment of downtown office use into Chinatown, the Department of City Planning has prepared the "Chinatown Preliminary Policy and Zoning Recommendations (April 1986)". The document was approved by the Planning Commission on June 24, 1986, with some revisions. The document includes preliminary proposed amendments to the City Master Plan and to the Planning Code, designed to protect residential and neighborhood-serving small-scale retail and service uses; architecturally significant buildings, residential uses, and sunlight access to sidewalks and parks. The document includes zoning which would change the maximum allowable height from 160 ft. to 50 ft. along Sacramento St. adjacent to the site on the west and to the north; change the Floor Area Ratio (FAR) for commercial development to 1:1, except along Kearny St (2.8:1) and Grant Ave. (2:1), from previous FAR limits of 3.6:1 to 6.0:1. Lots adjacent to and immediately north of the site, along Sacramento, Commercial, and Kearny Sts. would be rezoned to a CCB (Chinatown Community Business) district, and Grant Ave., would be rezoned to a CVR (Chinatown Visitor Retail) district. The current interim controls described above and shown on Figure 14, p. 44 implement the Chinatown Plan

recommendations. (Interim zoning was adopted by the Board of Supervisors, September 22, 1986. The controls expire on March 22, 1987 if final action ratifying the controls does not occur prior to that date.)

The site is outside the area regulated by the Chinatown Interim Controls. As described above, the Chinatown interim controls/study area adjoins the site to the west (along the Sacramento St. frontage) and to the north (across Sacramento St.).

## B. CULTURAL RESOURCES

Archival research was done for the project. A study entitled, Archival Cultural Resource Evaluation for Federal Home Loan Bank Building, 600 California Street, April, 1986, was prepared by an independent consultant and is on file at the Department of City Planning, Office of Environmental Review, 450 McAllister St./1/ The study is summarized below.

No evidence exists for prehistoric activity at the project site or in its vicinity.

The earliest recorded history in the vicinity of the site dates from the Spanish–Mexican period (1776–1849). The site was located within the Yerba Buena Cove which remained in its natural state until the Spanish–Mexican period. As early as 1822, an Indian sweathouse existed on the corner of Sacramento and Montgomery St., one block east of the site; however, there is no evidence of a Native American settlement anywhere on the site block. At that time the area was known as the town of Yerba Buena. The first permanent structure in the site vicinity, built in 1836 by Jacob P. Leese, was located at the southwest corner of Clay and DuPont Sts. (Grant Ave.), about one block northwest of the site. Subsequently, extensive building took place near the site. Within a three-block radius of the site, commercial and domestic dwellings were erected rapidly from 1839 onward. These dwellings were owned and occupied by carpenters, blacksmiths and ship builders. It cannot be determined from available archival sources whether or not the site was actually developed at this time. It is likely that structures were located on or near the site as early as 1844.

Three other periods of activity on the site identified in the study were: the Gold Rush period (1849–1857); the City Building/Late Nineteenth Century period (1858–1906); and the Twentieth Century period (1906–present). The 1853 U.S. Coast Survey map shows five

structures within the project site. By 1857, the project site was almost completely covered by structures, including Chinese commercial enterprises, low-cost hotels, saloons, and French and German pharmacies. During the City Building period, the project site was the location of numerous commercial enterprises, including a Chinese Cigar Box Factory, a Bamboo Works, a gunsmith's shop, and the plumbing establishment of W.E. Lane; the site also included the Tremont Motel, on Kearny St., which contained the Eureka Beer Hall and a photo shop on the ground floor.

Most recently, in 1954, the project site was developed with the existing 600 California St. office building, and in 1969, with the existing parking garage; and it is these buildings' uses that would be removed for the proposed project. The site condition at the time of the Spanish/Mexican period consisted of sand, a layer of about five to ten ft., overlying 10 ft. of clayey and sandy soil overlying bedrock. Since that time, the surface sand layer was removed for construction of the existing 600 California St. building in 1954 leaving the site at about 24 ft. San Francisco Datum.

Artifacts of consequence from the eras described above typically found at similar San Francisco sites include household effects such as porcelain and glass furnishings from the Gold Rush era, and Chinese effects such as household utensils, lacquered wood boxes, fans, cloth, jewelry, spiced perfumes, soap and cooking utensils from the Gold Rush and City Building eras. Such discoveries have served to expand the historic record of the people and events of these eras.

#### NOTE - Cultural Resources

/1/ Eleanor M. Ramsey, Ph.D., Mason-Tillman Associates, consulting archaeologists, conducted archival research for the project site and the surrounding area. The ensuing report, entitled Archival Cultural Resource Evaluation for Federal Home Loan Bank Building, 600 California Street, April 28, 1986, is on file at the Department of City, Planning, Office of Environmental Review, 450 McAllister Street.

## C. URBAN DESIGN

The project site contains two buildings: 600 California St., a nine-story office building of the 1950s International style built in 1954, constructed of reinforced concrete clad in polished granite; and a two-story, three level concrete parking garage built in 1969, with reinforced steel grillwork screening the second floor and roof (see Figure 8, p. 30).

The project area is a mix of older (dating from 1906 to the 1920s) and newer (beginning in the 1950s) development. Older buildings tend to be of brick or a mix of brick and concrete, often with terra cotta ornamentation, recessed ornamented windows, single or double cornices, and distinct compositional elements; thus, they generally contain more surface ornamentation than more recently completed high-rise buildings. Newer development tends to be constructed of concrete, steel, and glass. Windows are generally flush with the facade and ornamentation is minimal. Building bases are minimally defined, and building forms tend to be unembellished rectangles. This is particularly true of buildings from the 1950s through mid-1970s. Buildings in the immediate site area such as the Bank of America Headquarters and the International Building and more recently 580 California St. include more articulation and variation of facade materials than some of their contemporaries.

Existing buildings on the project block range from two to 34 stories, with generally light-to-medium colors and facade materials, including light-colored stone and concrete, reddish-colored brick, steel, and glass. The Hartford Building, adjacent to the site on the west, was built in 1965. It is 34 stories tall, and faced in concrete with recessed glass windows.

The two-story St. Mary's Parish House, immediately west of the Hartford Building is faced in red brick, and has no facade ornamentation. St. Mary's Church, west of the parish house, at the intersection of California St. and Grant Ave., was constructed in 1854 and rebuilt in 1909. It is faced in red brick with light-colored stone. There is Gothic ornamentation above the door and window openings; there are turrets with spires at the corners of rooflines. The Nam Kue School building, at 755 Sacramento (on the project block west of the site), is two stories tall, faced in yellow stucco, with a green tile roof. Unlike most development in the project area, this building is set back from the street by a small courtyard with a decorative wrought-iron fence. The school is representative of Chinese architectural design, with a roof and porch incorporating upturned eaves, topped with fishes and dragons. West of the Nam Kue School, at the southeast corner of Sacramento St. and Grant Ave., is the 781 Sacramento St. building, constructed in 1907; it is three stories tall, faced in yellow-gold stucco, with Italianate detailing including a cornice with scroll-shaped brackets, and recessed, rounded arch windows.

Buildings in the area generally are built to lot lines and form continuous street frontages which define the grid street pattern of the Financial District and Chinatown. Open spaces

in the area are the private, publicly accessible A.P. Giannini Plaza adjacent to the Bank of America Headquarters Building, diagonally across California and Kearny Sts. from the site; St. Mary's Square, located one block southwest of the site; Portsmouth Square two blocks north of the site; and the Chinese playground one block west of the site. The International Building, south of the site across California St., has a private outdoor plaza on the west side of the building, on the fourth floor. The Hartford Building, has a private, (publicly accessible) plaza area at ground level which is overhung by the building and open on the sides. The Nam Kue School, three lots west of the site, on Sacramento St., has a 25' x 45' private playground at the rear of the building.

The site buildings are visible from locations on Kearny St. between Market St. to the south and Columbus Ave. to the north. Taller intervening buildings block views of the site from other points more distant than one block east of the site. California St. and Sacramento St. are view corridors towards the Bay. The view east along California St. from Nob Hill is terminated by the One Market Plaza complex; east along Sacramento St. from Nob Hill, the view is terminated by the Embarcadero Freeway and the Bay beyond, the Ferry Building is visible at the end of Sacramento St. Views west along California St. and along Sacramento St. are of the eastern side of Nob Hill.

## D. SHADOW AND WIND

## **SHADOW**

The existing nine-story building and three-story parking garage on the site cast shadows on Kearny and Sacramento Sts. adjacent to the site on the east and north, respectively. Existing development in the project area casts extensive shadow in the project vicinity.

Existing and project shadow patterns for various times of the day and year are discussed in detail in Chapter IV, Environmental Impact, pp. 92 to 103. Section 147 of the Planning Code states that any new development in the C-3 districts should be shaped, consistent with the dictates of good design and without unduly restricting the development potential of the site in question, to reduce substantial shadow impacts on public plazas and publicly accessible spaces. Factors to be taken into account in the determination of shadow impacts include: the amount of open area shadowed, the duration of the shadow, and the importance of sunlight to the utility of the type of open space being shadowed.

WIND

U.S. Weather Bureau data show that westerly (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco./1/ Of the 16 primary wind directions measured at the Weather Bureau station (at a height of 132 ft.), four directions comprise the greatest frequency of occurrence as well as the majority of strong wind occurrences. These are northwest, west-northwest, west and west-southwest, with occurrence rates of about 10%, 14%, 35%, and 2%, respectively, of the time between the hours of 6 a.m. to 8 p.m throughout the year. The remaining 12 wind directions comprise the remaining 36% frequency of annual occurrence with lower wind speeds. Calm conditions occur two percent of the time.

Average wind speeds are highest during summer and lowest during winter months. However, strongest peak winds occur in winter, when speeds of 47 mph have been recorded./2/ The highest average wind speeds are in the mid-afternoon, and the lowest are in the early morning.

Between the hours of 7 a.m. and 6 p.m. on an annual basis, wind speeds measured at the Weather Bureau station exceeded 21, 25, 21, and 18 miles per hour (mph) 10% of the time for northwest, west-northwest, west, and west-southwest winds, respectively, while the 12 remaining wind directions exceeded 15 mph 10% of the time.

## Pedestrian Comfort and Wind Criteria

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result in increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four mph have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from eight to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph to 34 mph winds, umbrellas are used with difficulty, hair is blown

straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over./3/

In order to provide a comfortable wind environment for people in the Downtown, Section 148 of the Planning Code establishes an equivalent (includes the effects of turbulence) windspeed (as defined in the Code) of seven and 11 mph as comfort criteria and 26 mph as a wind hazard criterion. Section 148 sets comfort levels of seven mph equivalent wind speed for public seating areas and 11 mph equivalent wind speed for areas of substantial pedestrian use. New buildings and additions to buildings may not cause ground level winds that would exceed these levels more than 10% of the time year round between 7:00 a.m. and 6:00 p.m. year round./4/ If existing wind conditions exceed the comfort level, new buildings and additions shall be designed to reduce ambient wind speeds to meet the requirements. A building may qualify for an exception to the standard that would allow it to add to the amount of time the comfort level is exceeded by the least practical amount if 1) it can be shown that the building or addition cannot be shaped and other wind baffling measures cannot be adopted to meet the foregoing requirements without creating an unattractive and ungainly building form and without unduly restricting development of the building site in question, and 2) it is concluded that, because of the limited amount by which the comfort level is exceeded, the limited location in which the comfort level is exceeded, or the limited time during which the comfort level is exceeded, the addition is insubstantial. No building or addition would be permitted that would cause wind speeds to exceed the hazard level, defined as an hourly average of 26 mph, for more than a single hour of any year.

Existing and project generated wind conditions are discussed in detail in Chapter IV, Environmental Impact, p. 103 to 105 and Appendix B, p. A-42.

#### NOTES - Wind

/1/ The U.S. Weather bureau data used in this analysis were originally gathered at the weather station atop the old Federal building at 50 United Nations Plaza during the years 1945-50. Data were taken hourly, annually for 16 wind directions. The data base, comprised of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

/2/ E. Jan Null, Climate of San Francisco, NOAA Technical Memorandum, NWS WR-126, February 1978.

/3/ Lawson, T.V., and A.D. Penwarden 1976, "The Effects of Wind on People in the Vicinity of buildings," Proceedings of the Fourth International Conference on Wind Effects on buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605–622.

/4/ Section 148 of the Planning Code specifies the hours of 7 a.m. to 6 p.m. The available weather data that cover that interval cover the hours of 6 a.m. to 8 p.m. Thus, observation from two additional evening hours and one additional morning hour are included in these data. Because, in general, winds are stronger in the afternoon and evening than in the morning, this approximation is conservative – it is likely to overestimate the existing and projected wind speeds.

## E. TRANSPORTATION

The existing on-site 240-space garage provides valet parking for long- and short-term users. The existing Federal Home Loan Bank Building contains 29 ground-level parking spaces; thus there are a total of 269 existing spaces on the site. About 221 of these are used for long-term parking (vehicles stay more than four hours) and 48 are used for short-term parking (vehicles stay less than four hours). (A parking turnover survey was conducted at the garage and is presented in Appendix C, p. A-55. The survey indicates that a total of 240 vehicles use the garage and that 48 spaces operate as short-term while 192 operate as long-term; the 29 spaces, in the Federal Home Loan Bank Building, are long-term spaces, for a total of 221 long-term spaces.)

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p. 19). Access to the freeway connecting with the East Bay via the Bay Bridge is provided by ramps at Clay and Battery Sts. (about 2,300 ft. northeast of the site) and at Mission and Beale Sts. (about 2,700 ft. southeast of the site). Access to the freeway connecting with the Peninsula and San Francisco International Airport is also provided by these ramps. Access from the freeway system to the project site is provided by off-ramps at Washington and Battery Sts. (about 2,400 ft. northeast of the site) and at Mission and Main Sts. (about 2,800 ft. southeast of the site).

The site is within the Downtown Core automobile control area designated in the Downtown Transportation Plan of the Transportation Element of the San Francisco Master Plan./1/ A Plan goal is to reduce the number of private commuter vehicles and excess automobile traffic in the Downtown Core; the Downtown Transportation Plan discourages the addition of new long-term parking spaces in and around downtown.

In the vicinity of the project site, California St., Sacramento St. and Kearny St., north of Sacramento St., are designated as Transit Preferential Streets, on which priority is given to transit vehicles over autos during commute and business hours on weekdays/1/; the site has frontage on all three. Kearny and Montgomery Sts. are designated as Primary Vehicular Streets, which the Master Plan defines as "major routes for automobiles and truck movements into and out of the Downtown area." California and Grant Sts. are designated as pedestrian-oriented streets; such streets are vehicular streets on which design measures should be implemented to improve mobility and to render existing pedestrian space more pleasant and efficient. The intersections of Kearny St. with California and Sacramento Sts. are both signal-controlled (as are the intersections of Grant Ave. with California and Sacramento Sts., about one block west of the project site).

Kearny St. is one-way, northbound and carries three lanes of traffic, with five during the p.m. peak period as there is no parking in the curb lanes between 4 p.m. to 6 p.m. Sacramento St. is one-way westbound and carries one lane of traffic. California St. is two-way with four lanes of traffic (two in each direction); the center lanes are shared with the cable car tracks.

The site is served by San Francisco Municipal Railway (Muni) electric trolley and motor coach lines, providing radial service to and from the downtown area. Muni bus lines operate on California, Kearny and Sacramento Sts., along the project site. The C-Cable Car line operates on tracks in the middle of California St. The closest Muni bus stops to the project site are on Sacramento St., at the northwest corner of its intersection with Kearny St., serving the 1-California; on Kearny St. at the northeast corner of its intersection with California St., serving the 9X-San Bruno Express and the 15-Third, and on California St. at its intersection with Kearny St., serving the C-cable Car line. Muni Metro light rail vehicle lines are accessible via the Montgomery St. Station of the Market St. subway, five blocks south of the project site. Transit routes in the project vicinity are shown on Figure 28, p. 110.

Market St. is located five blocks south of the site; it is designated a Transit Thoroughfare in the Market Street Planning Project Final Report (November 1985). In August 1985, Muni began a nine-month trial operation of four-lane service on Market St. between the Financial District and Civic Center; this program will continue indefinitely and has

improved service transit along Market Street./2/ Improvements along Market St. in the vicinity of the project include relocated bus stops to conform with the provision of four transit lanes.

Regional transit service to the site is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Montgomery Station on Market St. (about five blocks southeast of the site), and by AC Transit motor coaches at the Transbay Transit Terminal, on Mission St. at First St., about seven blocks southeast of the project site.

Service to the Peninsula is provided by Caltrain from the train terminal at Fourth and Townsend Sts.; by the San Mateo County Transit District (Samtrans), with bus routes and stops along Kearny and Montgomery Sts. and Mission St. (the closest to the site is one block south); and by BART, which provides transfers to Samtrans routes at the Daly City BART Station. In addition, independently owned and operated jitneys provide service along the entire length of Mission St. (from The Embarcadero to Daly City) during a.m. and p.m. commute hours.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides a.m. and p.m. peak-period bus service from/to Marin and Sonoma Counties. The closest discharge (inbound) stop to the project site is located on Battery St. at Sacramento St. (about three block east of the site); the closest boarding stop (outbound) to the project site is on Sansome St. at Sacramento St. (about two blocks east of the site). Golden Gate Transit also provides ferry service to terminals in Larkspur and Sausalito from the Ferry building (about 3,500 ft. east of the site). They operate shuttle service from the Ferry Building to the Financial district and the South-of-Market area; the closest shuttle stop to the project site is at Montgomery and Sacramento Sts.

Golden Gate Transit also operates a vanpool and club (subscription) bus program to areas not served by fixed routes. The RIDES carpool program, operating as a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area carpools and vanpools. There are about 1,240 combined carpools and vanpools on the Golden Gate Bridge during the a.m. peak hour, carrying about 4,500 people daily (average occupancy of 3.6 persons per ridesharing vehicle)./3/ The Bay Bridge has about 2,800 carpools during the a.m. peak hour; carpools from/to the East Bay carry about 10,900 people daily (an average occupancy of 3.9 persons per carpool vehicle)./4/

Pedestrian activity around the site during the peak periods of 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m. is directed primarily to and from transit and parking facilities. Peak afternoon pedestrian flows are generally more intense than those of the morning period. Noon hour flows are similar to afternoon flows and are directed primarily to restaurants and retail stores within the downtown area.

Sidewalk widths on Kearny, Sacramento and California Sts. in front of the project site are restricted by trash cans, news stands, fire hydrants, parking meters, street trees and poles. The effective clear width of the Kearny St. sidewalk is 10.0 ft., about 69% of the full width of 14.5 ft. The effective clear width of the Sacramento St. sidewalk is 6.8 ft., about 68% of the full width of 10.0 ft. The effective clear width of the California St. sidewalk is 10.75 ft. about 73% of the full width of 14.8 ft.

The Kearny St. and California St. sidewalks in front of the project site, currently operate in unimpeded conditions during both the noon and p.m. peak periods. The Sacramento St. sidewalk in front of the project site currently operates in open conditions during the noon 15-minute peak period and unimpeded conditions during the p.m. 15-minute peak period. The crosswalks across Kearny St. (closest to the project site) at both California and Sacramento Sts. and the crosswalk across Sacramento St. (closest to the project site) all operate in unimpeded conditions during both the noon and p.m. peak periods. The crosswalk across California St. (closest to the project site operates in impeded conditions during the noon peak period and unimpeded conditions during the p.m. peak period./5/

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District.

#### NOTES - Transportation

/1/ San Francisco Department of City Planning, January 1983, <u>Transportation</u>, An Element of the Master Plan.

/2/ K. L. Wong, Muni Planning Division, telephone conversation, May 6, 1986.

/3/ Maria Thayer, Golden Gate Bridge, Highway and Transportation District, telephone conversation, December 2, 1985.

/4/ Traffic Survey Services MA-60, Bay Bridge, Metropolitan Transportation Commission, spring 1985.

/5/ Pedestrian counts conducted by ESA on Monday, May 19, 1986, from 12:00 p.m. to 1:00 p.m. and 4:30 p.m. to 5:30 p.m.

## F. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), total suspended particulates (TSP), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>). On the basis of the monitoring data, the Bay Area, including San Francisco, currently is designated a non-attainment area with respect to the federal ozone and CO standards. A four-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about three miles south at 900 23rd St.) is shown in Appendix D, p. A-58, together with the corresponding federal and/or state ambient air quality standards. In 1985, there were five violations of the previous state 24-hour average TSP standard. In 1984, there was one violation of the state ozone standard, and five violations of the previous state 24-hour average TSP standard; in 1983, there was one violation of the federal and state one-hour average ozone standards and four violations of the previous state 24-hour average TSP standard; in 1982 there was one violation of the federal and state eight-hour CO standard and three violations of the state 24-hour average TSP standard./1/

BAAQMD has conducted several CO "hotspot" monitoring programs in the Bay Area, including two in San Francisco. One CO monitoring program was conducted during the winter of 1979–80 at the intersection of Washington and Battery Sts., about 900 ft. northeast of the site./2/ The high eight-hour average concentration was 10.1 ppm, which violates the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm does not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO monitoring program was conducted during the winter of 1980–81 at the intersection of Geary and Taylor Sts., about 0.5 mile southwest of the site, and 100 Harrison St. at Spear, about 0.9 mile southeast of the site./3/ At Geary and Taylor the observed high eight-hour average concentration was 11.5 ppm, which violates the standards by 2.5 ppm, and the high one-hour concentration was 15 ppm, which does not violate the standards. At Harrison St., the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which do not violate standards. These data indicate that locations in San Francisco near streets with high

traffic volumes and congested flows may experience violations of the eight-hour CO standard under adverse meteorological conditions. In December 1985, the City monitored CO and counted traffic at the Sixth and Brannan intersection. These data are still being analyzed.

Comparison of the data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Three of the four prevailing winds, west, northwest, and west-northwest blowing off the Pacific Ocean, reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

San Francisco's air quality problems, primarily CO and TSP, are due largely to pollutant emissions from within the City. CO is a non-reactive pollutant and its major source is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion or adverse meteorology. TSP levels are relatively low near the coast, increase with distance inland, and peak in dry, sheltered valleys. The primary sources of TSP in San Francisco are demolition and construction activities, and motor vehicle travel over paved roads.

San Francisco contributes to regional air quality problems, primarily ozone, a regional problem in other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbon (HC) and nitrogen oxide (NOx) emissions, which are carried downwind as the photochemical reaction occurs. Ozone standards are violated most often in the Santa Clara, Livermore, and Diablo Valleys, because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

In 1982, emissions from motor vehicles were the source of 86% of the CO, 46% of the HC, 44% of the TSP, and 56% of the NOx emitted in San Francisco, while power plant fuel combustion was the largest single source of sulfur oxides (SOx), about 33% of the total./4/ These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO non-attainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the 1982 Bay Area Air Quality Plan, which

establishes pollution control strategies to attain the federal ozone and CO standards by 1987 as required by federal law./5/ These strategies were developed on the basis of detailed subregional emission inventories and projections, and mathematical models of pollutant behavior, and consist of stationary and mobile source emission controls and transportation improvements. The BAAQMD, MTC, and California Bureau of Automotive Repair (a state agency) have primary responsibility for implementation of these strategies.

## NOTES - Air Quality

/1/ State standards for particulate matter changed in 1983 to concentrate on fine particulate matter, which has been demonstrated to have health implications when inhaled. Concentration standards also changed. There is not yet an adopted method for monitoring fine particulate matter. Until the State adopts a method, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards.

/2/ Association of Bay Area Governments, AQMP Tech Memo 33, "Summary of 1979/80 Hotspot Monitoring Program," Berkeley, California, June 1980.

/3/ Association of Bay Area Governments, AQMP Tech Memo 40, "Results of the 1980/81 Hotspot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

/4/ Bay Area Air Quality Management District (BAAQMD), "Base Year 1982 Emissions Inventory, Summary Report," San Francisco, California, November 1, 1983.

/5/ Association of Bay Area Governments (ABAG), BAAQMD, and MTC, 1982 Bay Area Air Quality Plan, Berkeley, California, December 1982.

## IV. ENVIRONMENTAL IMPACTS

An application for environmental evaluation for a development proposal on the site was filed on February 14, 1986. On July 11, 1986, on the basis of an Initial Study, the Department of City Planning, Office of Environmental Review, determined that a tiered Environmental Impact Report (EIR) was required. Issues determined as a result of the Initial Study to require no further environmental analysis included: Land Use, Reflected Light and Glare, Population (except project-specific employment), Construction and Operational Noise, Construction Air Quality, Utilities/Public Services, Biology, Geology/Topography, Water, Energy/Natural Resources, Hazards, and Architectural Resources. Therefore, except as noted below, this document does not discuss these topics (see Appendix A, pp. A-2 to A-41, for the Initial Study). Based on the proximity of the site to the Chinatown Plan Interim Controls area, Land Use has been included in the Environmental Impact Report, and subsequent to the Initial Study, the Department determined that Construction Noise required further analysis. Therefore, these topics are included in the EIR. The Residence Patterns and Housing discussion on pp. 136 to 137 has been added for informational purposes.

This tiered EIR has been prepared for the project pursuant to Sections 21093 and 21094 of the California Environmental Quality Act (CEQA). The EIR is tiered from the EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984). The 600 California St. EIR analyzes project–specific impacts. It discusses potentially significant effects of the project that were not examined in the Downtown Plan EIR and includes applicable mitigation measures for site–specific effects. The analysis identifies the project portion of the relevant cumulative impacts forecast in the prior EIR.

The Downtown Plan EIR process included development of a complex and sophisticated economic forecast of employment growth, and computerized transportation and air quality models for calculating and predicting cumulative impacts of development in the downtown C-3 districts to the year 2000. Development of the forecast and transportation and air quality models, and presentation of their analyses in the EIR required several years of work. The Downtown Plan EIR, from which this later single-project EIR is

tiered, includes about 600 pages of Comments and 400 pages of Responses to those comments. The Downtown Plan Final EIR was certified October 18, 1984.

The Downtown Plan, itself, was approved by the Planning Commission on November 29, 1984, and its implementing ordinances were approved by the Board of Supervisors (Ordinance 414–85 approved September 10, 1985), effective October 17, 1985. The approval process thus took place over about 12 additional months subsequent to the EIR process and included public hearings and testimony. Discussion of, as well as explanation and clarification of issues and information in, the Downtown Plan EIR included exhaustive review in public forums, during the EIR process and the Plan approval process, before the Planning Commission and the Board of Supervisors.

The Downtown Plan EIR forecasts and analyzes the effects of cumulative development (including those of the project) in the Downtown C-3 district, to the year 2000. That analysis remains current and valid for future and project conditions, and thus, the project is not subject to CEQA Section 21166 regarding changed circumstances or new information.

As noted, the EIR cumulative impact analysis relies on the Downtown Plan EIR (DTPEIR) cumulative impact analysis, and that analysis remains valid. The current validity or "freshness" of the DTPEIR assumptions and analysis was recently established in the Final EIR (FEIR) for 235 Pine St. (84.432E, certified April 17, 1986). The material contained in the 235 Pine St. Draft Summary of Comments and Responses, at pp. 9–21, 25–30, 32–38 and 54–59 is summarized below and incorporated by reference herein.

The 235 Pine St. EIR Comments and Responses discuss the current validity of the Downtown Plan EIR assumptions and analysis with regard to development and land use forecasts, employment growth, transportation impacts, office rental and vacancy rates and housing production. The DTPEIR forecasts are considered to be long-term forecasts that focus on the amounts and types of growth expected through the year 2000. No attempt was made to forecast on an annual or short-term basis, and the long-term forecasts include a number of shorter-term ups and downs which average out over time. In general, it was concluded in the 235 Pine FEIR that no new data or information are available that would indicate that the long-term forecasts prepared for the DTPEIR are substantially off-target or misleading. With regard to the more specific issues such as

transportation impacts, office vacancy rates, housing impacts, etc., it was concluded that the assumptions in the DTPEIR remain valid and the analysis remains current.

Thus, for example, it was concluded that the recent drop in gasoline prices in early 1986 was temporary and would not cause long-term shifts in mode split from transit to auto use. This is due not only to the temporary nature of the gas price drop (as of September 1986, prices have stabilized) but also to the fact that bridges and freeways providing access to San Francisco were generally at or near capacity during the p.m. peak at the time the DTPEIR baseline analyses were done, and are expected to continue to be at or near capacity, with increases in peak-of-the-peak over time (235 Pine Comments and Responses, p. 26; DTPEIR Vol. 1, pp. IV.E. 32 & 34). While driving may temporarily appear attractive to some commuters, length of time of commute would deter others or cause shifts to carpools or transit by other drivers in the "push-pull" relationship between traffic congestion and transit ridership (see 235 Pine Comments and Responses, p. 27).

It was also concluded that housing completions in San Francisco were about 940 units in 1983-84 and about 1,000 units in 1985. These figures fall squarely within the DTPEIR forecast of 600-1,500 units per year on average (235 Pine St. Comments and Responses, p. 54). Similarly, the recent increase in office vacancy rates was forecast in the DTPEIR which anticipated that space approved in the mid-late 1980s would not be absorbed by 1990 (see 235 Pine St. Comments and Responses, pp. 21 and 34; DTPEIR Vol. 1, pp. IV.B. 23-29; Vol. III, Part 1, pp. C&R-B. 10-11).

Comments on this single-project EIR for 600 California St. are to be confined to those matters analyzed in this EIR, related to project-specific effects and the relation of this project to relevant cumulative impacts. Insofar as the Downtown Plan EIR is a final, certified document, it would be inappropriate to reopen the EIR process by accepting further comments on that EIR. Therefore, comments on material contained in the prior EIR from which this project-specific EIR is tiered will not be accepted.

Some of the effects presented in this Impact Chapter are not physical effects as defined by CEQA. They are included in the EIR for informational purposes only.

As discussed in the Initial Study, the project would be consistent with the Downtown Plan policies and ordinances for which a Final EIR (EE81.3) was certified October 18, 1984. The project's consistency with these local land use plans and zoning meets the CEQA requirements for a tiered EIR.

## A. LAND USE AND ZONING

#### LAND USE

The following paragraph summarizes material from the Downtown Plan EIR. This summarized material is found on the following pages of the Downtown Plan EIR which are incorporated by reference:

Volume I: Final EIR text. Pages I.B.1-I.C.5; II.8-11; IV.B. 18-90; IV.C.29-61.

Volume II: Appendices. Appendices G and H.

Volume III: Part 1: Responses. Section B.

The Downtown Plan EIR provides forecasts of amounts of space likely to be found in the C-3 District in the future and of the numbers of employees likely to be working in the C-3 District in the future. These forecasts are described in detail; the results are found in the various tables in the EIR. Table IV.B.10, page IV.B.33 shows about 125,243,000 sq. ft. of space in the year 2000, of which about 78.9 million would be in office uses. Table IV.C.15, page IV.C.41 shows total employment forecasts of about 372,000 persons in 2000, in the C-3 District.

The project would replace existing office and parking uses at the site with similar uses. Office uses would be at a greater intensity, retail would be introduced to the site, and parking would be reduced by about 37 spaces. The intensification of office uses at the site, which would result from the project, would continue high-rise office development in the site vicinity. Traditionally, the northwestern Financial district has been characterized by office uses and downtown support businesses such as parking, retail, printing, and other services. Some older buildings in the area, which typically house these uses, have been replaced by high-rise office buildings, such as the International, Hartford, Bank of America, and 580 California buildings.

The project would require demolition of two buildings, a nine-story office building and a two-story (with rooftop use) parking structure, for construction of an office and retail building stepped down from 18 stories at California and Kearny Sts., to nine stories with a three-story portion along the western third of the Sacramento St. frontage. The site contains office and downtown support uses (a car rental office and a parking garage). The

project would replace these uses with a building containing about 312,700 gsf of office space, a net increase of about 216,100 sq. ft.; about 7,900 gsf of retail space, all of which would be a net increase; about 90,600 gsf of parking space (232 spaces), a net increase of about 22,200 gsf (but a net decrease of 37 spaces), and about 10,400 sq. ft. (all net new) of open space.

The 600 California St. project, located within the C-3-O district, would be consistent with the designated primary use of the District under the Downtown Plan; that is, high-density office and retail (p. 24 of the Downtown Plan).

The project would be consistent with the description of the C-3-O (Downtown Office) district described in Article 2, Section 210.3 of the City Planning Code. The section states that the district "playing a leading national role in finance, corporate headquarters and service industries and serving as an employment center for the region, consists primarily of high quality office development."

Parts of the northwestern Financial district, particularly northeast of the project block, have recently been developed with high-rises such as the Montgomery/Washington tower, Bank of Canton, and 456 Montgomery St.; 580 California St. was recently completed directly east across Kearny St. from the site, the 505 Montgomery St. tower is under construction one block northeast of the site. The project would be similar in scale and use to high-rise development south, southeast, and east of the site; it would be smaller than high-rise development immediately south, east and west. The project would differ in scale and use from development on the project block west of the Hartford Building, development north and west of the project site, and with lower scale development farther south along Kearny St.; the project would be larger than these developments. The project would represent the continuing intensification of downtown financial district uses at the western boundary of the C-3-O district.

Recognizing the potential for encroachment of downtown office uses into Chinatown, the Department of City Planning has prepared Chinatown Preliminary Policy and Zoning Recommendations (April 1986) designed to protect the Chinatown area's existing economic, social and cultural diversity; preserve existing housing and encourage new affordable housing; protect and facilitate the expansion of service and neighborhood-serving small-scale retail and service activities; and preserve existing amenities and improve neighborhood livability including preserving architecturally

significant buildings and sunlight access to sidewalks, parks, and public open space. The City Planning Commission adopted the Interim Zoning Controls on June 24, 1986 and the Board of Supervisors adopted the Interim Controls on September 22, 1986. The Interim Controls were signed by the Mayor on October 3, 1986. The area subject to the Chinatown Interim Controls is bounded roughly by Columbus Ave. and the Downtown C-3-0 District on the east, Stockton and Powell Sts. on the west, Vallejo and Green Sts. on the north, and Bush and Sacramento Sts. on the south. The permanent zoning controls proposed by the Department for Chinatown would create three use district subareas, each with its own controls, to encourage retention of existing primary uses and to facilitate controlled expansion of similar uses. The subareas would be designated as CCB (Chinatown Community Business), CVR (Chinatown Visitor Retail), and CR/NC (Chinatown Residential/Neighborhood Commercial). The site is outside of and adjacent to the Interim Controls/Chinatown study area.

#### THE DOWNTOWN PLAN

The Downtown Plan, part of the Master Plan, effective October 17, 1985, and as implemented by the Planning Code, contains comprehensive controls regarding the scale, intensity, and location of growth in downtown San Francisco; architectural preservation; open space; sunlight access; wind criteria; and transportation. The relationship of the project to the major sections of the Downtown Plan is discussed here and summarized in Table 2, pp. 65 to 70.

Under the Downtown Plan, the basic FAR for the C-3-0 district, including the project site, is 9:1. Floor Area Ratio is the ratio of gross floor area of the building to site size. A number of building uses may be excluded from the gross floor area calculation. The Downtown Plan and Planning Code (Section 102.8(b)1-16) include allowable exemptions from gross floor area for the FAR calculation including, for example, ground-floor building service and internal circulation; replacement short-term parking if required by the City Planning Commission, cultural, religious and social service areas; and ground-floor (and mezzanine-level, subject to approval under Section 309) retail, restaurant, and personal service space up to 75% of ground-floor interior and open space areas, and parking equal to, or less than, seven percent of the gross floor area. Development greater than the basic 9:1 FAR is allowable up to a maximum of 18:1 FAR, through transfer of development rights (TDR), from sites within the same zoning district

TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS

	Planning Code	Drainat
	Requirements/Limits	<u>Project</u>
Height (Sections 260 and 263.9	9) 275 ft./a/	244/138 ft./b/
Base Height (Floors 1 to 9) Bulk (Section 270)	106 ft.	106 ft./c/
Lower Tower (Floors 10 to 13)		
Length	160 ft.	155 ft.
Diagonal	190 ft.	170 ft.
Maximum Average Floor	17,000 sq. ft.	13,190 sq. ft.
Maximum Floor	20,000 sq. ft.	13,190 sq. ft.
Upper Tower (Floors 14 to 19)		
Upper Tower (Floors 14 to 18) Length	130 ft.	155 ft.
Diagonal	160 ft.	170 ft.
Maximum Average Floor	12,000 sq. ft.	12,740 sq. ft.
Maximum Floor	17,000 sq. ft.	13,190 sq. ft.
Volume Reduction		,
(above 160 ft.)	10%	5%
FAR (Section 124)	0.1 Pagia 19.1	
ran (Section 124)	9:1 Basic, 18:1 Maximum with TDR	11:1
	Maximum with LDK	11.1
TDR	Plan allows for transfer of	65,700 sq. ft. of
(Section 128)	development rights from	TDR would be used
	buildings designated as	on the development
	Category I-IV for	site.
	architectural merit.	
Architectural	Designates buildings in	Not applicable.
Resources	Categories I to IV, and into	Buildings on-site
(Article II)	six Conservation Districts,	are not in any
	based on architectural	Category or within a
	merit, with related provisions	designated Conserva-
	regarding preservation.	tion District.
Open Space	One sq. ft. per 50 sq. ft. of	10,400 sq. ft. on
(Sections 138	office and retail space (and	site: (7,300 sq.
and 139)	ancilliary space such as	ft.) outdoor terrace
and 100)	mechanical and storage but not	on the rooftop of
	including parking), or 8,020	the 18-story southern
	gross sq. ft. for the project;	tower, and (3,100 sq.
	the project proposes 10,400	ft.) in a galleria
	gross sq. ft. of open space	along California St.
	or 2,380 gross sq. ft. in	
	excess of the requirement	

(continued)

TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS

## Planning Code Requirements/Limits

## Project

(Cont.)
Open Space
(sections 138
and 139)

(based on 401,000 gross sq. ft.) and contribution of \$2.00 for each net new gross sq. ft. of office to Downtown Park Fund (\$432,000 for project).

Shadow (Sections 147 and 295) Minimize substantial shadow impacts on public plazas and other publicly accessible spaces, without unduly restricting development potential; consider duration, area, and importance of sunlight to utility of open space. Proposition K, the Shadow Ban Initiative, requires disapproval of any project shading Recreation and Park Department property between one hour after sunrise and one hour before sunset, unless adverse effects of such shadows are found to be insignificant.

Project would not add new shadow to any public open space. The project would not cast any new shadow on property under the jurisdiction of Proposition K.

Wind (Section 148) Ground-level winds may not exceed (more than 10% of the time year round between 7 a.m. and 6 p.m.) 11 mph in areas of substantial pedestrian use and 7 mph in public seating areas. Wind speeds may not exceed the hazard level, defined as an hourly average of 26 mph, for more than a single hour of any year.

At one location, on the roof of the existing 600 California building, the 26 mph hazard criteria is exceeded with current conditions. The project would cause wind speeds to increase at five locations (by one to four mph), to remain the same at 11 locations, and to decrease at six locations (by one to eight mph) The project would cause violations of the 11 mph pedestrian comfort criterion at one location along California St. Winds at the A.P. Giannini Plaza would continue to violate applicable comfort criteria.

TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS

## Planning Code Requirements/Limits

## Project

(Cont.)
Wind
(Section 148)

Winds in St. Mary's Square would be unchanged at one location and decreased at one: both locations would continue to exceed the 7 mph seating criterion. The 7 mph seating criterion would also be exceeded at the proposed open space on the roof of the 18-story portion of the building. The project would require an allowable exception to Code (Section 148(a)) for increased wind speed above 11 mph at one location on California St. noted above. The hazard criterion would not be exceeded with the proposed building, at any of the locations tested.

Art (Section 149) Publicly accessible art equal to one percent of construction cost.

Project would comply, in a manner to be determined.

Off-Street Loading The equivalent of three spaces. (0.1 spaces per 10,000 sq. ft. office, no spaces for the less than 10,000 sq. ft. of retail.)

Project would comply, with three truck loading docks.

Parking (Section 155.(g))

Rate structure to encourage short-term use and discourage long-term use. Planning Commission may approve replacement short-term parking, which would then be exempt from FAR.

232 spaces would be provided. Rate structure would encourage short-term use for 48 replacement short-term spaces and any additional spaces designed as short-term (pursuant to Section 303). Forty-eight short-term and 82 long-term spaces are proposed; it has not been determined whether the remaining 102 spaces would be long- and/or short-term spaces. Vanpool and bicycle parking would be provided.

Transportation Required. Broker (Section 163)

Would be provided by building management

TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS

	Planning Code Requirements/Limits	<u>Project</u>
Housing	OAHPP requires 83 units for the proposed 216,100 net new sq. ft. of office./d/	Sponsor would contribute funds for construction of a low- and moderate-income housing project.
Employment (Section 164)	Local employment program and employment brokerage services required for buildings exceeding 100,000 sq. ft. to encourage employment and work training for San Francisco residents.	Building management to provide brokerage services.
Childcare (Section 315)	On-site childcare services, participation in childcare consortium or brokerage, or payment of in-lieu fee of \$1.00 times net new office sq. ft. required (\$220,000 for project.)	Project would comply, in a manner to be determined.

## SECTION 309: EXCEPTIONS REQUIRED FOR THE PROJECT

Section 132.1(c)2(B). Separation of Towers

Requirement: Minimum setback above base of 15 ft. from interior property line or center line of street.

Exception: The project would be set back less than the required amount along a portion of the west (interior) property line. The center of the west wall of the southern portion of the building would be set back from the interior property line by about 10 ft. (at the mechanical core), five feet less than the required amount (above the base). (The rest of the west wall of the southern portion of the building would be set back 15 ft. from the interior property line, as required). The west wall of the northern portion of the building would not be set back from the interior property line, and thus would not meet the 15 ft. setback requirement. Exception to the Separation of Towers requirement is allowable in accordance with the provision of Section 309 under Section 132.1(c)2 if at least one of the criteria under Section 132.1(c)2.A-C is met.

Section 148(a). Reduction of Ground Level Wind Currents in C-3 Districts.

Requirement: Ground-level winds may not exceed (more than ten percent of the time year round between 7 a.m. and 6 p.m.) 11 mph in areas of substantial pedestrian use and 7 mph in public seating areas.

(Continued)

# TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS

Exception: The project would require an allowable exception to Section 148 for one

location on California St. where as noted above, it would cause the

11 mph criteria to be violated.

Section 155(g). Short-term Parking Rate Structure

Requirement: Rate structures in the C-3 Districts shall be "such that the rate charge for four hours of parking duration is no more than four (4) times the rate

charge for the first hour, and the rate charge for eight or more hours of parking duration is no less than ten times the rate charge for the first hour. Additionally, no discounted parking rate shall be permitted for

weekly, monthly or similar time-specific periods."

Exception: Forty-eight short-term parking spaces are proposed with a short-term rate structure and 82 long-term parking spaces are proposed without a

short-term rate structure. The sponsor would apply for Conditional Use authorization for additional 102 spaces for a total of 232 spaces

altogether. The 102 spaces could be long- or short-term. The Planning

Code does not require parking for office and retail uses in the C-3 districts. The Planning Code does not prohibit long-term parking. There is no allowable exception to Section 155(g) under Section 309; the project

sponsor has requested an opinon from the Zoning Administrator on whether a variance could allow a long-term rate structure for the

proposed long-term spaces.

Section 270(c)2. Bulk Limits

Requirement: Upper tower: maximum length of 130 ft., maximum diagonal of 160 ft.,

maximum average floor size of 12,000 sq. ft., and volume reduction

(above 160 ft.) of about 10%.

Exception: The upper tower (floors 14–18) would have a maximum length of 155 ft., a

maximum diagonal of 176 ft., and a maximum average floor size of about 12,740 sq. ft., thereby exceeding the specified Code maximums by 25 ft., 10 ft., and 740 sq. ft. respectively. The project would include a volume

reduction of about five percent, (five percent less than the 10%

required). Exception to the bulk requirements is allowable in accordance with the provisions of Section 309 under Section 272 (a) if at least one of

the criteria under Section 272(a) 1-5 is met.

/a/ According to Section 263.9(a), in an S district additional height up to 10% (in this case 25 ft.) of the allowable height (in this case 250 ft.) may be permitted as an extension of the upper tower provided that the volume of the upper tower is reduced by the percentage shown in Chart B of Section 270(c). In addition, a 16-ft.-tall penthouse is allowable. Thus, the maximum allowable height would be 291 ft.

(Continued)

# TABLE 2: RELATIONSHIP OF THE PROJECT TO THE DOWNTOWN PLAN PLANNING CODE REQUIREMENTS (Continued)

/b/ The project would be 244 ft.-tall at California and Kearny Sts. plus a 22-ft. mechanical penthouse on the west, or 266 ft. at its highest point, and would step down to 138-ft.-tall including a 19-ft.-tall screen which would enclose mechanical equipment at Kearny and Sacramento Sts.; the northwest corner of the project (on Sacramento St.) would step down further to 45 ft.

/c/ The height of the base of the project would be 106 ft. above grade as measured from the center of the project frontage along California St. (the widest abutting street). /d/ Office Affordable Housing Production Program (OAHPP) (Ordinance No. 358–85). The existing 600 California St. office building contains about 96,600 sq. ft. of office space; thus the project would add about 216,100 net new sq. ft. of office space on the site (312,700 – 96,600 = 216,100 sq. ft.)

SOURCE: Environmental Science Associates, Inc.

that include architecturally significant buildings with unused potential floor area. The combined basic FAR over the preservation (sender) and, accessory parking and freight development (receiver) sites may not, however, exceed 9:1. The building on the development site receiving TDR must comply with all limitations imposed by the Planning Code, including review under Section 309: Permit Review in C-3 Districts.

The Downtown Plan includes four categories of architecturally significant buildings: Category I (significant buildings; retain essentially intact); Category II (significant buildings; additions to height at rear may be feasible); Category III (contributory buildings outside a conservation district and of individual importance; encourage retention); and Category IV (contributory buildings in a conservation district; encourage retention; allow replacement as a contributory building). TDRs may not be transferred to sites containing significant or contributory buildings, if development would result in demolition or substantial alteration of these buildings. Neither of the buildings on the site are listed in any category. About 65,700 gross sq. ft. of TDR is proposed to be transferred to the project from as yet unidentified sites. The overall FAR for the development and contributory lots would be 9:1, or less.

The total gross sq. ft. of the project including the basement levels would be about 452,300 gross sq. ft. The building would contain about 352,000 gross sq. ft. of floor area

applicable to the FAR of the building; as calculated under the Planning Code, the FAR of the project over the 31,822-sq.-ft. development site would be about 11:1. Excluded from the FAR of the building are certain mechanical space, replacement short-term parking, loading, and ground floor uses. Personal services, retail and restaurant uses may not ground-floor (and mezzanine-level, subject to approval under Section 309) retail, restaurant, and personal service space up to 75% of ground-floor interior and open space areas, and parking equal to or less than seven percent of the gross floor area. Development greater than the basic 9:1 FAR is allowable up to a maximum of 18:1 FAR, through transfer of development rights (TDR), from sites within the same zoning district that include architecturally significant buildings with unused potential floor area. The exceed 75% of the area of the ground-floor interior and open space areas; subject to the provisions of Section 309, a portion of these uses may be located on a mezzanine level. Under Section 102.8(b)16, floor area for accessory parking and loading space, as defined in Section 204.5, would not be counted in the FAR calculation of the building; accessory parking space may include up to seven percent of the total gross floor area of the building. In addition replacement short-term parking may be excluded (pursuant to Section 309) from the FAR if required by the City Planning Commission. Parking area in excess of the seven percent (and the replacement short-term spaces, only if not required by the Planning Commission) would require Conditional Use authorization and would apply to the FAR. The project would provide (excluding entry and exit ramps, which are exempt from FAR calculation under the Code) about 78,300 gsf of parking space (about 48 short-term and 82 long-term spaces, the remaining 102 spaces could be short and/or long-term as determined by the City Planning Commission), which would be about 39,300 gsf more than the seven percent allowable as accessory use for the project. Thus, Conditional Use authorization would be required, and this 39,300 gsf has been included in the calculation of FAR for the project.

The site is in a 250-S height and bulk district; the height limit is 250 ft. Structures up to 275 ft. are allowable under the provisions outlined for optional upper tower extensions. Section 263.9 states that the "additional height may be allowed pursuant to the provisions of Section 309 only to the extent it is determined that the upper tower volume is distributed in a way that will add significantly to the sense of the slenderness of the building and to the visual interest of the termination of the building, and that the added height will improve the appearance of the skyline when viewed from a distance, will not adversely affect light and air to adjacent properties, and will not add significant shadows

to public open spaces." A total additional 16 ft. in height is allowable for a mechanical penthouse enclosure under Section 260(b), subject to the requirements of Section 141(b), pursuant to the provisions of Section 309. At 138 ft. (including a 19 ft.-tall screen which would enclose mechanical equipment) to 266 ft., (including a 22-ft.-tall mechanical penthouse), the project would be 153-ft. lower on the north, and 25-ft. lower on the south, respectively, than the maximum allowable height of 291 ft. with penthouse. The northwest corner of the project would step down to 45-ft. or 246 ft. lower than the maximum allowable height. The S-Bulk designation controls building dimensions, floor sizes and bulk through Downtown Plan Bulk Control Zone Charts B and C. Essentially, these bulk controls require setbacks, smaller floor sizes and slimmer building profiles with increased building height. The controls require a base zone of a height not exceeding 1.25 times the width of the widest abutting street, in this case, California St. which is about 85-ft.-wide, delineated by a setback, cornice or other architectural feature. The base of the project would be about 106 ft.-tall (the height above grade as measured from the center of the project frontage along California St). The maximum permitted base height is 1.25 times the width of the widest abutting street or about 106 ft. The base of the project would include floors one through nine.

The building's lower tower, as defined by the Downtown Plan, would occupy only the southern portion of the site) would extend above the building base from the top of the ninth floor at a height of about 106 ft. (defined as the height above grade as measured from the center of the project frontage along California St.; this would be equal to a height of about 113 ft. above grade at the California/Kearny intersection) to the top of the 13th floor at a height of about 160 ft. (again, 160 ft. would be the height above grade as measured from the center of the project frontage on California St.; it would be equal to a height of about 167 ft. as measured from the California/Kearny intersection). The upper tower would extend above this to a height of about 244-ft. (as measured above grade at California/Kearny intersection), with an additional 22-ft.-tall mechanical penthouse above for a maximum height of 266 ft. With a maximum floor area and a maximum average floor area of about 13,190 sq. ft., a maximum diagonal dimension of 170 ft., and a maximum length of 155 ft., the project would be within the lower tower bulk limits specified in the Downtown Plan and City Planning Code. The northern portion of the project would be included in the base, and would not extend above it (except for the 19-ft.-tall screen on the top of the ninth floor of the northern portion of the tower).

Diagonal and length dimensions of the project in the upper tower (170 ft. and 155 ft., respectively) would exceed the maximums of 160 ft. and 130 ft. specified in the Code, by 10 ft. and 25 ft., respectively. With a maximum average floor area of 12,740 sq. ft., and a maximum upper tower floor area of about 13,190 sq. ft., the project would exceed the maximum average floor area by about 740 sq. ft., but would be 3,805 sq. ft. less than the maximum floor area allowable for the upper tower (maximum average floor size of 12,000 sq. ft. and maximum floor area of 17,000 sq. ft.). For a 244-ft.-tall building with a lower-tower average floor size of about 12,740 sq. ft., the S-bulk controls require a volume reduction in the upper tower (above 160 ft.) of about 10%; the project would have a volume reduction of about five percent.

The project would require exceptions under Section 272(a) in accordance with Section 309, for exceedance of bulk limits and required volume reduction in the upper tower as described above.

The Planning Code requires setbacks above the building base to allow for separation of and light and air between towers (Section 132.1(c)1). Above the base, the required setback is a minimum of 15 ft. from the interior property line or the center of a public right-of-way, as the case may be, up to a height of 300 ft.; above 300 ft. the setback requirement increases linearly up to a height of 550 ft., to a maximum of 35 ft.

The 138-ft.-tall to 244-ft.-tall project would be required to be set back by about 15 ft. from the interior (western) property line above the base of the building (above a height of 106 ft.). The central portion of the western face of the 244-ft.-tall southern portion of the project would be set back above the base by about ten feet from the property line (five ft. less than required). The rest of the western face of the southern portion of the project would be set back above the base by about 15 ft. from the property line, and would meet the setback requirement. The 138-ft.-tall northern portion of the project would not require a setback from the western property line as it would be within the base height of the building. The 34-story Hartford Building abuts the southern portion of the site on the west. The Hartford Building is setback from the property line abutting the site by about seven feet (it has a double height arcade at ground-level along this side of the building); it rises without setbacks to a height of about 490 ft. Thus, the project office tower would be separated from the Hartford Building tower by between about 17 ft. and 22 ft. As the base of the building would be set back by between 10 ft. and 15 ft. (when it is not required

to be set back at all), the setbacks at the base are intended to provide the compensating recesses beyond the required setback within 50 vertical ft. of the encroachment (see discussion of exceptions below).

Exception to setback requirements is allowable, pursuant to Section 132.1(c) 2(A) and 2(B), subject to approval under Section 309. Exceptions are allowable provided there are compensating recesses beyond the required setback within 50 vertical ft. of the encroachment, which recesses are at least equal in volume to the volume of the encroachment; and/or where it can be shown that restrictions on adjacent properties make it unlikely that development will occur at a height or bulk which would, overall, impair access to light or air or the appearance of separation between buildings; and/or on lots with a frontage of less than 75 ft.

Abutting the northern portion of the site on the west is the boundary of the Chinatown CCB district under Interim Controls adopted by the Board of Supervisors, September 22, 1986. The controls limit height to 50 ft. in this district. The existing building abutting the north portion of the site, on the west, is about 30 ft. tall. The proposed building would have a height of about 45-ft. at this western corner of the Sacramento St. frontage, which is intended to respond to the 50-ft. height limit abutting that portion of the site and to the height of the existing development there.

The Downtown Plan/Planning Code requires usable indoor or outdoor open space, accessible to the public, as part of new downtown development (Section 138). The ratio of usable open space to new building space in the C-3-0 is one sq.-ft. of open space for every 50 sq. ft. of gross floor area, or about 8,020 sq. ft. for the project (open space requirement includes gsf of office, retail, lobby and other ground floor uses, service loading mechanical and storage and that amount of parking included in the FAR, or a total of 401,000 gross sq. ft. for the project). The project would include 10,400 sq. ft. of open space with 7,300 sq. ft. on the rooftop of the southern portion of the building and 3,100 in the galleria along California St. or 2,380 sq. ft. in excess of that required; the project sponsor would also contribute \$432,200 to the Downtown Park Fund per Section 139 of the City Planning Code.

The Downtown Plan and the Planning Code require that shadows on publicly accessible open space be minimized (Section 147). New buildings are to be shaped, consistent with the dictates of good design and without unduly restricting the development potential of

the site, to reduce substantial shadow impacts. Among the factors for the determination of shadow impact are: amount of area shadowed; duration of the shadow; and the importance of sunlight to the utility of the type of open space being shadowed. (See Section IV.D, pp. 93 to 104 for a discussion of shadow impacts of the project). Proposition K, the Park Shadow Ban Initiative, implemented by Section 295 of the Planning Code, requires disapproval of any project shading Recreation and Park Department property between one hour after sunrise and one hour before sunset, unless adverse effects of such shadows are found to be insignificant.

The Downtown Plan/Planning Code requires that ground-level winds may not exceed (more than 10% of the time year round between 7 am and 6 pm) 11 mph in areas of substantial pedestrian use and 7 mph in public seating areas (Section 148). The project would cause violations of the 11 mph pedestrian comfort criteria at one location along California St., continue existing violations at four locations along California St., at the A. P. Giannini Plaza and would continue existing violations of the 7 mph seating criteria at two locations in St. Mary's Square. The 7 mph seating criteria would also be exceeded at the proposed project open space on the roof of the 18-story portion of the building. The project would require an allowable exception under Section 148(a) in accordance with the provisions of Section 309, for causing a violation of the pedestrian wind comfort criteria, at one location along California St.

The Downtown Plan/Planning Code requires, and the project sponsor would provide, public art equal to one percent of construction cost.

The Downtown Plan/Planning Code requires the equivalent of three off-street loading spaces for the project. The project sponsor would comply with this requirement.

The Downtown Plan/Planning Code requires that the project sponsor provide on-site child care facilities, participate in a consortium with other sponsors or subcontract with a child care brokerage service to provide such service within two blocks of the project site, or contribute an in-lieu fee. The project would meet this requirement, in a manner to be determined.

#### THE MASTER PLAN

The project would respond to some objectives and policies of the Commerce and Industry Element of the Master Plan. It would respond to Objective 1, Policy 1, "to maintain and enhance a favorable business climate in the City." The employment that would be generated by the project is described in Section H, p. 129, of this chapter.

The project is intended to respond to Objective 4, Policy 2, to promote and attract economic activities of benefit to the City. The project would respond to Objective 6, to support San Francisco as a "prime location for financial, administrative, corporate, and professional activity". The project would respond to Policy 1 of this Objective, to encourage continued growth of downtown office activity.

Policy 2 of Objective 6 guides "office development to maintain a compact downtown core so as to minimize displacement of other viable uses". The project would respond to Policy 2 because it would, in part, be an infill project (in its replacement of a two-story parking garage), close to a major downtown transit center. The project would respond to Policy 4 of Objective 6 of the Commerce and Industry Element to provide "amenities for those who live, work and use the Downtown" by provision of about 7,900 sq. ft. of retail space, and enclosed open space at the ground level, and in a rooftop terrace. There is no existing retail space or open space on the site.

#### B. CULTURAL RESOURCES

An archaeological resources report titled, "Archival Cultural Resource Evaluation for Federal Home Loan Bank Building, 600 California Street" was prepared for the proposed site by Eleanor Mason-Ramsey, Ph.D., consulting archaeologist, and is on file with the Office of Environmental Review, Department of City Planning, 450 McAllister Street. The investigation suggests the presence of significant subsurface cultural resources on the site from the Gold Rush period on.

The earliest recorded history in the vicinity of the site dates from the Spanish-Mexican Period, when an Indian Temescal (sweathouse) existed between 1822 and 1842 on the corner of Sacramento and Montgomery St., one block east of the site. The earliest

recorded history on the site dates from the Gold Rush Period. The 1853 U.S. Coast Survey map shows five structures within the project site. The proposed project would include excavation to a depth of 30 ft. below grade which would be below the foundation level of the existing buildings (about 18 ft. below the existing basement), and which would disturb soils probably never exposed.

The buildings currently on the site date from the 1950s and 1960s.

The investigation suggests the presence of significant cultural resources on the site dating from the Gold Rush. Artifacts would also be expected to be encountered from the City Building Period (1886–1906). Excavation for the proposed project might intrude upon artifacts and might damage any resource irretrievably. Further investigation would be needed to determine means for removing the resource intact. Measures are included as part of the project to mitigate potential impacts on any cultural resources (see pp. 140 to 142).

### C. URBAN DESIGN

The project would demolish two buildings, a nine-story office building (600 California St.) and a two-story (with rooftop parking) garage (551 Kearny St.), and construct a highrise similar in scale to existing newer highrises in the Financial district, and contrasting in scale with older mid- and low-rise buildings in the project vicinity (see Figures 15-20, pp. 79 to 84).

The Urban Design Element of the San Francisco Master Plan contains policies and principles which may be used to evaluate the proposed project. Table 3, pp. 85 to 91, Relationship Between Applicable Urban Design Policies of the Master Plan and the Proposed Project, compares the project to these policies.

The architectural base element would be similar in scale to the existing street wall height on Kearny St. north of Sacramento, and would relate to the base of the 580 California St. building across Kearny St. from the site. It would be larger in scale than development on Sacramento St.

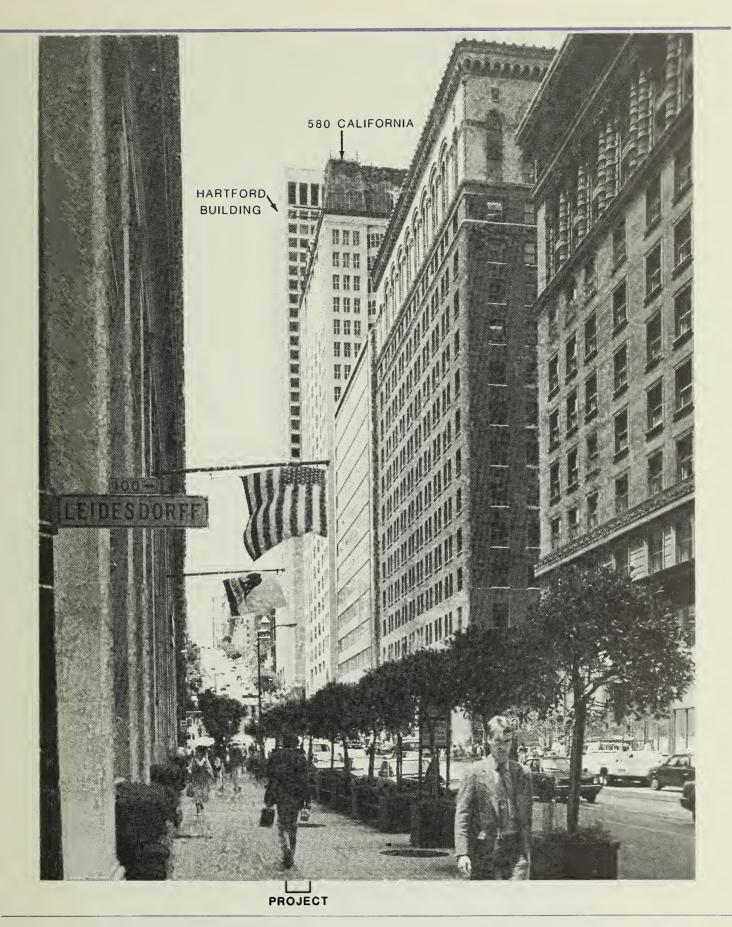
The building would step down along Kearny St. from an 18-story southern tower at California St. to a nine-story northern tower at Sacramento St., and would have a

three-part vertical composition: the architectural base (ground-floor, and second- and third-floor levels); a middle shaft (floors four through 15 in the southern tower and floors four through six in the northern tower); and a top (levels 16 through 18 and a mechanical penthouse in the southern tower, and levels seven through nine and a mechanical screen in the northern tower). The project would be built to exterior property lines and to the northern portion of the west interior property line to a height of about 45 ft., stepping up to 138 ft. at Sacramento and Kearny Sts. The project would be set back by between ten feet and 15 ft. on the southern portion, from the interior property line (adjoining the adjacent Hartford Building). The shorter northern tower would be 138 ft. tall, and would extend south from Sacramento St. about 118 ft. Above about 138 ft., the southern portion of the building would continue straight up to, and including, the 18th floor (the mechanical penthouse would be set back from all but the western edges of the building).

A cornice line at the fourth level would extend horizontally along all building faces defining the architectural base. Bay windows and projecting piers clad in light-colored masonry would extend vertically from the cornice line at the base to the upper portions of the building.

The three-story architectural base element would have double-height rectangular openings to provide pedestrian access to the galleria along California St. Between the galleria openings would be single-height entrances at ground-level to the office lobby and retail areas, with recessed windows above extending vertically up to the second and third floors.

On the north and south faces, rectangular indentations (one on the south and two on the north) would begin at the cornice line at the fourth floor and extend vertically up to the upper portions of the tower. Building corners would be indented between the base cornice line and the upper portions of the building as on the north and south faces. There would be a series of bays, on the east and west faces, extending vertically to the upper portion of the towers. Decorative lanterns would be regularly spaced atop the building. Bay windows and projecting piers clad in light-colored masonry extending vertically from the base cornice line to the upper portions of the building, are intended to reflect the facades of larger, older development in the adjacent Financial district. Public open space consisting of a terrace with seating and landscaping would be located on the rooftop of the taller, southern tower. (Text continues on p. 92.)



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Square One Film + Video

FIGURE 15
PHOTOMONTAGE OF PROJECT WEST FROM
CALIFORNIA/LEIDESDORFF INTERSECTION



600 California Strect Federal Home Loan Bank of San Francisco

SOURCE: Square One Film + Video

FIGURE 16
PHOTOMONTAGE OF PROJECT SOUTH FROM
KEARNY/MERCHANT INTERSECTION



PROJECT



600 California Street Federal Home Loan Bank of San Francisco

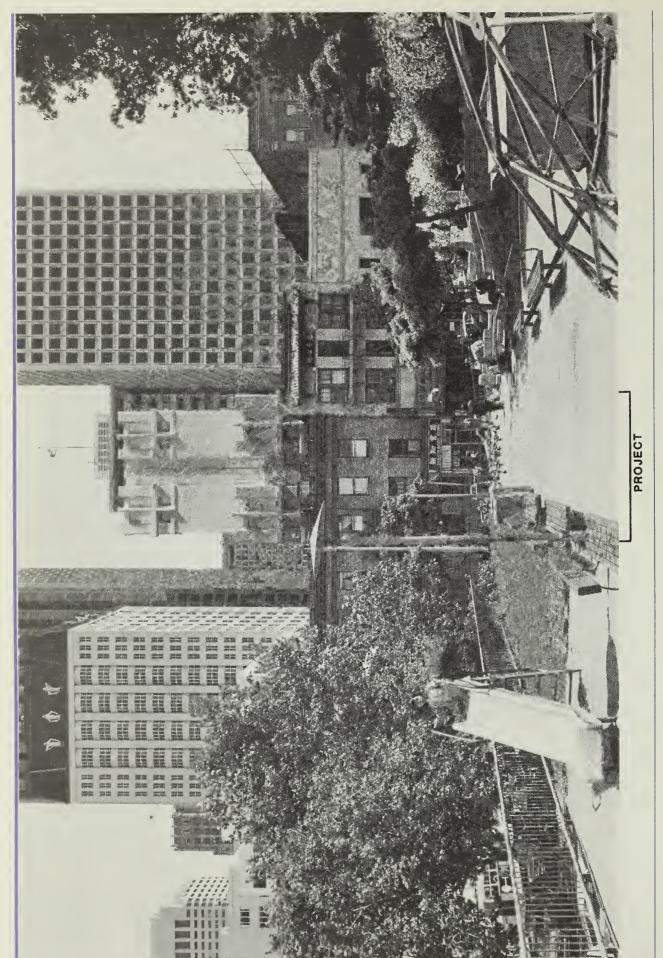
SOURCE: Square One Film + Video

FIGURE 18
PHOTOMONTAGE OF PROJECT
WEST FROM SACRAMENTO STREET
(EAST OF SPRING STREET)

PROJECT

600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Square One Film + Video



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Square One Film + Video

#### URBAN DESIGN PLAN POLICIES

Objective 1, Policy 1 – Recognize and protect major views in the City, with particular attention to those of open space and water." (p. 10)

Objective 1, Policy 3 – "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)

#### RELATIONSHIP OF PROJECT TO POLICIES

The project would be located along California St., a major designated view corridor. The project would not block views of Nob-Hill along this corridor. The northern site boundary is Sacramento St., which is also a major designated view corridor. The project would not obstruct any public views of the Bay or of the Ferry Building at the foot of Sacramento St. The project would partially obstruct views of Nob Hill along Sacramento St. from public open space at the podium level plazas of Four Embarcadero Center.

The proposed building would be 45 ft.-tall on the western third of the Sacramento St. frontage and step up to 138-ft.-tall for two-thirds of this frontage to the corner of Sacramento and Kearny Sts. The 45 ft.-tall corner of the Sacramento St. frontage would be of similar scale to the 30 ft.- to 53 ft.-tall buildings along Sacramento St. and Grant Ave., on the project block west of the site and across Sacramento St. on the north. The 138 ft.-tall portion of the project frontage on Sacramento St. would be taller than low-rise development north of the site on Kearny St., and low-rise development on Sacramento St. west and north of the site. The 244-ft.-tall, southern tower would be about 220 ft. shorter than the Hartford Building (immediately west of the site), about 76 ft. shorter than the 580 California St. building (immediately east of the site), about 82 ft. shorter than the International Building (immediately south of the site), about 571 ft. shorter than the Bank of America Headquarters Building (diagonally across California and Kearny Sts. from the site), and would be taller than mid and low rises south on Kearny St. toward Market St. The project would help define the western edge of the Financial district and its edge along Sacramento St., defining the high-rise character of the Financial district at its boundaries with

#### URBAN DESIGN PLAN POLICIES

Objective 1, Policy 3 (continued)

Objective 1, Policy 6 - "Make centers of activity more prominent through design of street features and by other means." (p. 12)

Objective 2, Policy 4 - "Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." (p. 25)

Objective 2, Policy 6 - "Respect the character of older development nearby in the design of new buildings." (p. 25)

Objective 3, Policy 1 - "Promote harmony in the visual relationships and transitions between new and older buildings." (p. 36)

#### RELATIONSHIP OF PROJECT TO POLICIES

Chinatown to the west and north. The project would step down from the Financial district toward Chinatown.

The project would increase the visual prominence of the site and pedestrian interest compared to the existing unembellished office building and concrete parking garage. It would include ground-level retail space, and galleria open to California St. visible to passing pedestrians and drivers. Art work would be included in the project, in a manner to be determined.

The buildings on the site are not landmarks, do not have significant or contributory status under the Downtown Plan, and were not rated in the City's 1976 or the Heritage architectural surveys. Through the use of TDR, the project would preserve a significant or contributory building (or buildings) elsewhere in the C-3-O district.

The project would differ in form and scale from buildings north and west (on its northern portion) and would be similar to buildings south, east, and west (on its southern portion). The height of the architectural base and the 45 ft.-tall westernmost frontage along Sacramento St. are intended to complement the height of older development along Sacramento St. and Grant Ave. on the project block, and the base of the 580 California St. building. The project would be faced in light-colored masonry and stone, intended to complement building materials of adjacent structures.

The project would be a transition in scale among surrounding buildings, stepping down from south to north along Kearny St. and from east to west along Sacramento St. It would be similar to, but shorter than, buildings south and east such as the 580 California St. Building, the International Building, and the Bank of America Building;

#### URBAN DESIGN PLAN POLICIES

Objective 3, Policy 1 (continued)

Objective 3, Policy 2 - "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance." (p. 36)

Objective 3, Policy 3 – "Promote efforts to achieve high quality of design for buildings to be constructed at prominent locations." (p. 36)

Objective 3, Policy 4 – "Promote building forms that will respect and improve the integrity of open spaces and other public areas." (p. 36)

Objective 3, Policy 5 – "Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development." (p. 36)

#### RELATIONSHIP OF PROJECT TO POLICIES

it would be different from, and taller than buildings north and west in Chinatown which are generally two to four stories tall (except for the westernmost Sacramento St. frontage of the project which would be three stories tall). Vertical bays, rectangular indentations and articulated building corners to emphasize the slenderness of the project building, and a horizontal belt course defining the project base, are intended to reduce the apparent bulk of the building and relate it to the 580 California St. building and to older, low-rise development across Sacramento St. north of the site.

The project would be similar in scale to nearby newer buildings. The building would be faced in light-colored masonry and stone, intended to complement building materials of adjacent structures such as 580 California St. and older development across Sacramento St. north of the site.

The building would include architectural features, such as the projecting cornice line at the architectural base, and the double-height arch openings at building corners and the lobby entrance intended to complement adjacent development including 580 California St. and older buildings on Sacramento St. north of the site, and to be in character with existing high-rise development in the C-3 District.

The project would include a private, publicly accessible galleria open to California St. (connecting to the existing Hartford Building Plaza) and public open space on the roof of the southern tower.

The project would be taller and more visible than existing structures along the south side of Sacramento Sts. adjacent to the site on the west, (except for the northwestern

#### URBAN DESIGN PLAN POLICIES

Objective 3, Policy 5 (continued))

Objective 3, Policy 6 - "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37)

#### RELATIONSHIP OF PROJECT TO POLICIES

corner of the project which would be three stories tall) and two-to four-story buildings north across Sacramento St. and in Chinatown to the north. At nine to 18 stories, it would be lower than newer high-rise buildings in the immediate vicinity on the west, east and south, such as the 34-story Hartford Building on the west, the 23-story 580 California St. Building to the east, the 22-story International Building to the south, and the 52-story Bank of America Headquarters Building to the southeast. It would be taller than low-rise buildings further north and south on Kearny St.

The project would be greater in bulk than most of the low-rise older buildings in the site vicinity and similar in bulk to some newer development including the 580 California St. and International buildings; it would be of lesser bulk than the Bank of America and Hartford buildings. The project would exceed Downtown Plan/Planning Code maximum length, maximum diagonal, and maximum average floor limits in the upper tower. The upper tower would have a volume reduction of about five percent (a 10% reduction would be required). Code exceptions would be required for upper tower bulk (except maximum floor size) and volume reduction. Vertical bays and rectangular indentations on the building's faces are intended to emphasize a slender project appearance. The proposed building would step down from the taller southern tower to the lower northern tower; thus, the building would provide a visual transition between high-rise buildings adjacent to the California/Kearny intersection and mid-rise buildings at the Sacramento/Kearny intersection. The northern tower would step down westward along Sacramento St. from Kearny St., intended to provide a visual transition between high-rise buildings along Sacramento St. east of Kearny St., and lowand mid-rise buildings west along

#### URBAN DESIGN PLAN POLICIES

Objective 3, Policy 6 (continued)

### DOWNTOWN PLAN - URBAN FORM CHAPTER - POLICIES

"Relate the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development." (p. 84)

#### RELATIONSHIP OF PROJECT TO POLICIES

Sacramento St. This proposed transition could result in a building that would decrease in height, uphill, rather than following the hill's topography (that is, increasing in height uphill).

The proposed project would be at the north boundary of the Financial district, where it meets Chinatown, and about one-half block from the Financial district border with Chinatown to the west. The project would be of intermediate height in its context and constructed in three steps. It would be shorter than buildings immediately south, west and east along California St., and would be taller than buildings immediately west and north along Sacramento St. The proposed building would be 45 ft.-tall at the westernmost third of the Sacramento St. frontage and step up to 138 ft.-tall for two-thirds of the frontage to the corner of Sacramento and Kearny Sts. The 45 ft.-tall corner of the Sacramento St. frontage would be similar to the 30 ft.- to 53 ft.-tall buildings along Sacramento St. and Grant Ave., on the project block west of the site. At the 138 ft.-tall frontage on Sacramento St. the project would be taller than low-rise development north of the site on Kearny St. and low-rise development on Sacramento St. west and north of the site. The 244-ft.-tall southern portion of the building would be taller than the 40 ft.-tall St. Mary's Church (one-half block west of the site) and about 220 ft. shorter than the Hartford Building (immediately west of the site), about 76 ft. shorter than the new 580 California St. Building (immediately east of the site), about 82 ft. shorter than the International Building (immediately south of the site), and about 571 ft. shorter than the Bank of

### DOWNTOWN PLAN POLICIES, continued

"Relate the height . . . ."

"Foster sculpturing of building form, less overpowering buildings and more interesting building tops." (p.84)

"Maintain separation between buildings to preserve light and air and prevent excessive bulk." (p. 96)

"Assure that new buildings contribute to the visual unity of the City." (p. 105)

#### RELATIONSHIP OF PROJECT TO POLICIES

America Headquarters Building (diagonally across California and Kearny Sts. from the site). The project would be of intermediate height compared with the 60 ft.-to 300-ft. tall buildings along California and Sacramento Sts. east of the site.

The project would feature vertical bay windows, rectangular indentations and articulated building corners above the architectural base (intended to reduce the appearance of bulk). The project would include two towers with a step down from California/Kearny to Sacramento/Kearny, and from Kearny along Sacramento to the northwest corner of the project. The articulated building corners would terminate in decorative architectural features of the top of the towers.

The project would be set back about five ft. less than the required 15 ft. setback above the base on the west where the southern portion of the building would abut the interior lot line. The separation between the project and the Hartford Building tower would be 17 to 22 ft. The north tower would not be set back from the interior property line. The project sponsor would seek an exception to the Separation of Towers requirement under Section 132.1 (c(2A-B)) of the Planning Code.

The building would be faced in light colored material and would not use mirrored glass. The project would incorporate a defined architectural base element of similar height to that of nearby older development along Sacramento St. north of the site, and along Sacramento St. and Grant Ave. west of the site. Architectural features and decorative elements of the project are intended to relate to older development north and west and to the 580 California St. Building east across Kearny St.

#### DOWNTOWN PLAN POLICIES, continued

"Encourage more variation in building facades and greater harmony with older buildings through use of architectural embellishments and bay or recessed windows." (p. 105)

"Conserve the traditional street to building relationship that characterizes downtown San Francisco." (p. 106)

"Provide setbacks above a building base to maintain the continuity of the predominant streetwalls along the street." (p. 106)

"Maintain and enhance the traditional downtown street pattern of projecting cornices on smaller buildings and projecting belt courses on taller buildings." (p. 107)

"Use design and materials and include activities at the ground floor to create pedestrian interest." (p. 107)

#### RELATIONSHIP OF PROJECT TO POLICIES

The project would include vertical bays on the east and west faces, and rectangular indentations on all faces, with articulated building corners. The project would have recessed windows and architectural embellishments; decorative lanterns would be regularly spaced atop the building.

The building's architectural base would be built to lot lines at California, Kearny, and Sacramento Sts. and would define a streetwall height relating to older development nearby on Sacramento St. and Grant Ave. and the base of the 580 California St. Building. The project tower would be of comparable height to existing development on the north side of California St., east of the adjacent Hartford Building, and along the south side of California St., immediately south of the site.

The proposed step down from the south tower to the north tower of the project would maintain the continuity of existing streetwalls surrounding the site.

The building would incorporate a cornice line above the architectural base.

A galleria would be located alone California St. connecting to the Hartford Building plaza. Retail space would be located and accessible on the ground floor along California, Kearny and Sacramento Sts. Stone detailing and a projecting cornice line and double-height arch openings at the architectural base are intended to give the project pedestrian scale.

SOURCE: Urban Design Element, San Francisco Comprehensive Plan, 1971; Downtown Plan, October 1985; Environmental Science Associates, Inc.

Along Sacramento St. the proposed building would be 45 ft.-tall along the western third of the frontage and would step-up to 138 ft.-tall for the remaining two-thirds of the frontage to the corner of Sacramento and Kearny Sts. The 45 ft.-tall corner of the Sacramento St. frontage would be similar in height to existing structures on the project block, such as the 40-ft.-tall St. Mary's Church at California St. and Grant Ave. and the two- to four-story, 30- to 53-ft.-tall buildings along Grant Ave. and Sacramento St. west of the site. The 138 ft.-tall portion of the frontage would be taller and more visible than most existing structures on the project block. The 244 ft.-tall southern portion of the building would be 220 ft. shorter than the 34-story, 465-ft.-tall Hartford Building adjacent to the site's western property line, and would be taller than St. Mary's and other Chinatown development on the west. It would be shorter than nearby, newer development, such as the 320-ft.-tall 580 California St. Building across Kearny St., east of the site, the 815-ft.-tall Bank of America Headquarters Building diagonally across California St., south of the site.

The project would be visible from Portsmouth Square, about two blocks to the north, and would partially block views of the International Building and Bank of America Headquarters Building (see Figures 15-20, pp. 79 to 84). The project would partially block views of Nob Hill along Sacramento St. including views from outdoor open space on the podium levels of Four Embarcadero Center. It would block views of the International Building from Telegraph Hill. The project would block views of the Bay east from lower floors of the Hartford Building; it would block views of Telegraph Hill from windows on the northern side of the International Building; and it would block views northwest from lower floors of the Bank of America Headquarters Building and lower floors of the 580 California St. Building. The taller, southern tower of the project would be partially visible from Market St. at Kearny/Third St. and from Powell St. at California St. and at Sacramento St. The project would be visible from the northern edge of St. Mary's Square, one-half block south of the site. The project would not block views of the Bay along California St. and Sacramento St. from Nob Hill. The project would not be visible from long-range view-points such as Twin Peaks, Potrero Hill, the Bay Bridge/Treasure Island, because of existing, intervening high-rise buildings. The project would be visible as part of the view of the Financial district, looking southeast from Russian Hill.

The project would change views for people walking or driving toward the site, particularly views toward the site from one to three blocks north or south along Kearny St. The taller southern portion of the project would be of similar mass to the 580 California and International buildings, and would add to the massing of lower highrises at this intersection, surrounded by the larger Bank of America and Hartford buildings. The proposed project would add to the visual effect of highrise construction in the project area.

### D. SHADOW AND WIND

#### **SHADOW**

Shadow patterns for existing and approved buildings in the project area (including existing buildings on the site) and the project are shown for 10 a.m., noon and 3 p.m. for the four seasons: during winter and summer solstices when the sun is at its lowest and highest, and during the spring and fall equinoxes when the sun is at its midpoint (see Figures 21 to 24, pp. 95 to 98). Conditions from July through November mirror the conditions from January through May (using solar time). The analysis includes shadows cast on streets, sidewalks, pedestrian areas, and open space in the area potentially affected by the proposed project. A shadow outline of the project as though cast on the ground, without intervening buildings, is shown to illustrate the scale of the project in relation to the structures that would surround it. The diagrams in Figures 21 to 24 show existing and approved building shadows and net new shadow due to the project. Additional shadow diagrams were drawn at various times during the afternoon hours of all four seasons to determine the effects of existing buildings on the rooftop terrace of the proposed project. See discussion of open space (below) and Proposition K (pp. 99 to 104). (These diagrams are on file at the Department of City Planning, 450 McAllister St., San Francisco.)

Open spaces in the project vicinity consist of the Bank of America's A.P. Giannini Plaza (privately owned, publicly accessible) located diagonally across the California and Kearny Sts. intersection about 110 ft. southeast of the site; the Hartford Building Plaza, which is covered by the upper floors of the Hartford Building and open on the sides, (privately owned, publicly accessible) immediately west of the site; a plaza on the fourth floor of the International Building (privately owned, not publicly accessible, about 100 ft.

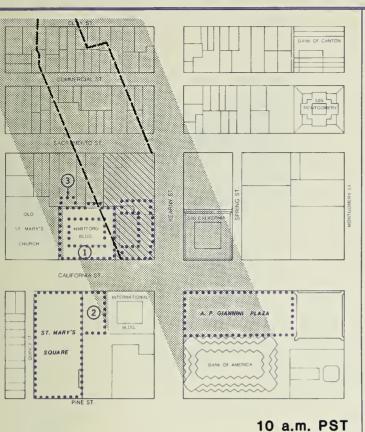
southeast of the site); a playground located behind the Nam Kue School adjacent to the Hartford Building about 70 ft. west of the site (privately owned, not publicly accessible); St. Mary's Square, about 125 ft. southwest of the site; the Chinese Playground, about 500 ft. northwest of the project; and Portsmouth Square, about 400 ft. north of the site (the latter three are city parks). St. Mary's Square, Portsmouth Square and the Chinese Playground are under the jurisdiction of the Recreation and Park Department, and are subject to Proposition K, the Park Shadow Ban initiative. The project would provide about 10,400 sq. ft. of new open space, 7,300 sq. ft. in a rooftop terrace on the 18–story south tower of the project and in the 3,100 sq. ft. galleria along California St. Project shadow effects on affected open spaces are discussed below.

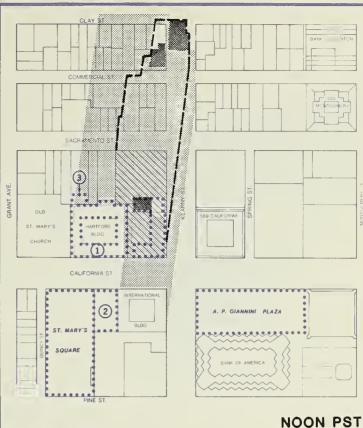
### December 21 (PST)

At 10 a.m. Pacific Standard Time (PST) on December 21, (see Figure 21, p. 95), the proposed project would add no new shadow to the project area. At noon, the proposed project would add a new shadow about 50 ft. wide and 60 ft. long to Kearny St. between Commercial and Clay Sts. and about 1,900 sq. ft. (about 26%) of new shadow in the northeastern area of the proposed project rooftop open space. At 3 p.m., the project would add no new shadow to any streets or sidewalks; new shade from the project would fall on rooftops to the north and east, and to about a 1,200 sq. ft. area (about 16%) in the central and southern parts of the proposed project rooftop open space.

### March 21 (PST)

At 10 a.m. PST on March 21, (see Figure 22, p. 96), the proposed project would add a new triangle of shadow (about 20 ft. by 30 ft. by 30 ft.) to the roof tops of buildings on Sacramento St. across from the project site. At noon, the building would add new shadow about 100 ft. long to Sacramento St., to about a 1,200 sq. ft. area in the northwestern part of the proposed project roof top open space (about 16%) and to roof tops of buildings on Sacramento St. directly across from the project site. At 3 p.m., the building would add new shadow to most of the Sacramento and Kearny St. intersection and to the northern sidewalk of Sacramento St. on the east and west side of the intersection.





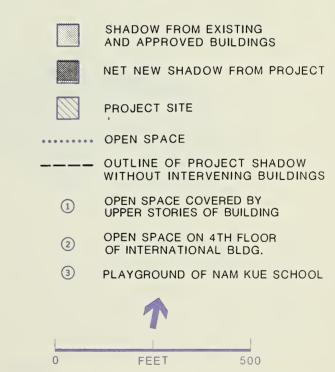
**LEGEND** 

CALIFORNIA SI

CALIFORNIA SI

PINE ST

3 p.m. PST



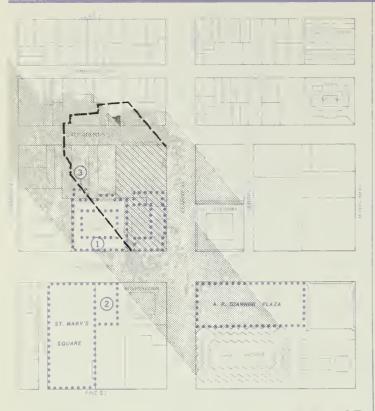
NOTE: SHADOW ON EXISTING SITE BUILDINGS IS NOT SHOWN

WITHIN PROPOSED PROJECT ROOFTOP OPEN SPACE AREA.

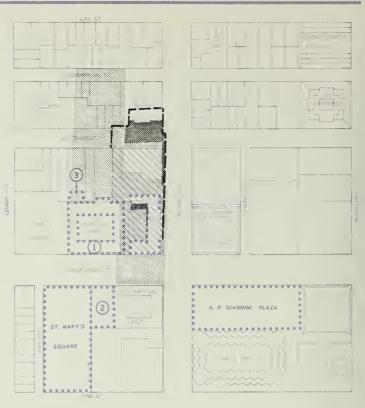
500 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

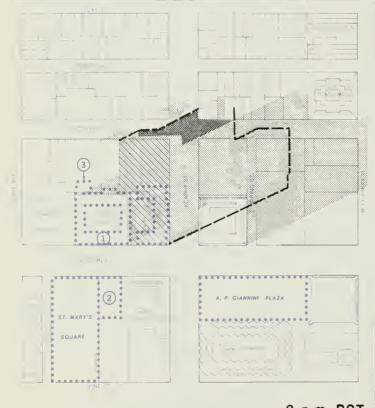
FIGURE 21 SHADOW PATTERNS -DECEMBER 21



10 a.m. PST



NOON PST



3 p.m. PST

## **LEGEND**

- SHADOW FROM EXISTING AND APPROVED BUILDINGS
  - NET NEW SHADOW FROM PROJECT
- PROJECT SITE
- OPEN SPACE
- ---- OUTLINE OF PROJECT SHADOW WITHOUT INTERVENING BUILDINGS
  - OPEN SPACE COVERED BY UPPER STORIES OF BUILDING
  - OPEN SPACE ON 4TH FLOOR OF INTERNATIONAL BLDG.
  - 3 PLAYGROUND OF NAM KUE SCHOOL

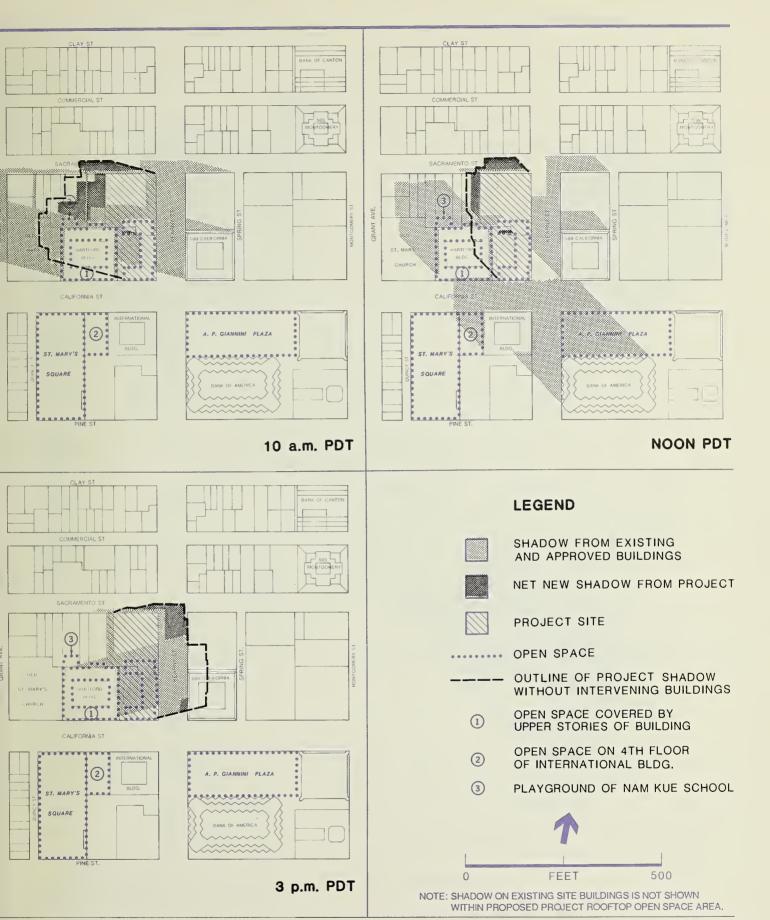


NOTE: SHADOW ON EXISTING SITE BUILDINGS IS NOT SHOWN WITHIN PROPOSED PROJECT ROOFTOP OPEN SPACE AREA.

600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

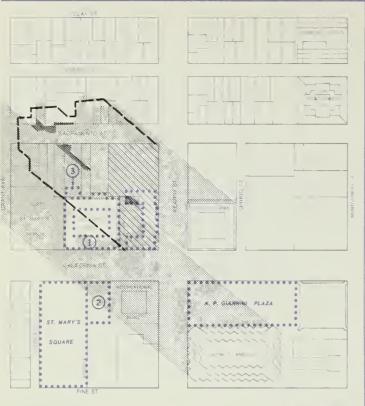
FIGURE 22 SHADOW PATTERNS -MARCH 21



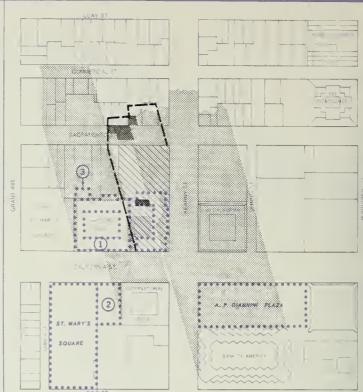
600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

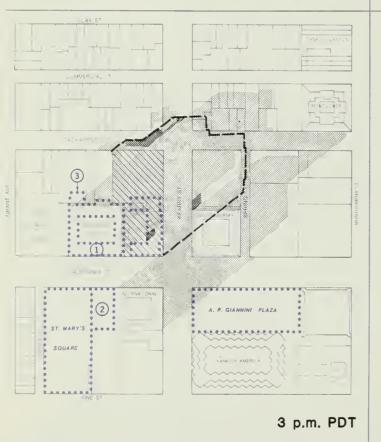
FIGURE 23 SHADOW PATTERNS -JUNE 21



10 a.m. PDT



NOON PDT



LEGEND

SHADOW FROM EXISTING AND APPROVED BUILDINGS

NET NEW SHADOW FROM PROJECT

PROJECT SITE

OPEN SPACE

---- OUTLINE OF PROJECT SHADOW
WITHOUT INTERVENING BUILDINGS

① OPEN SPACE COVERED BY UPPER STORIES OF BUILDING

OPEN SPACE ON 4TH FLOOR OF INTERNATIONAL BLDG.

3 PLAYGROUND OF NAM KUE SCHOOL



NOTE: SHADOW ON EXISTING SITE BUILDINGS IS NOT SHOWN WITHIN PROPOSED PROJECT ROOFTOP OPEN SPACE AREA.

600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

FIGURE 24 SHADOW PATTERNS -SEPTEMBER 21

## June 21 (PDT)

At 10 a.m. Pacific Daylight Time (PDT) and noon, to a lesser degree, on June 21 (see Figure 23, p. 97), the project would add new shadow to the southern half of Sacramento St., from Kearny St. west on Sacramento about halfway to Grant Ave., and on rooftops of buildings immediately west of the site. At 3 p.m., the project would add new shadow to the south part of the Kearny and Sacramento St. intersection, and on the eastern sidewalk of Kearny St. about one-quarter of the block between Sacramento and California Sts., and an approximately 25 ft. long by 30 ft. wide rectangular area of Kearny St. and sidewalk, northeast of the Kearny and California St. intersection.

## September 21 (PDT)

At 10 a.m. PDT on September 21 (see Figure 24, p. 98), the project would add new shadow to an approximately 70 ft. wide by 20 ft. long area of Sacramento St. and its northern sidewalk (and to rooftops there, and within the project block) and to about 950 sq. ft. area in the northwestern part of the proposed project rooftop open space (about 13%). At noon, the project would add new shadow across from the project site, to a portion of the northern side of Sacramento St. and its adjacent sidewalk, and rooftops in that direction and to about 950 sq. ft. area in the northwestern part of the proposed project rooftop open space (about 13%). At 3 p.m., the project would shade most of Sacramento St. at Kearny and a portion of its northern sidewalk and building rooftops, across from the project site, a narrow strip of shadow across Kearny St., and a portion of the rooftop of buildings across Kearny St., east of the site and to an approximately 15 ft. wide by 25 ft. long area in the central part of the proposed project rooftop open space (about 5%).

### Proposition K

In June 1984, the voters of the City and County of San Francisco approved Proposition K, the Park Shadow Ban initiative ordinance prohibiting the issuance of building permits for structures that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission unless the City Planning Commission determines that such shade would have an insignificant adverse impact on the use of such property.

Figure 25, p. 101 shows the maximum extent of project shadow on potentially affected property as though cast on the ground without existing intervening buildings. Due to intervening buildings, the project would add no new shadows to any property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the hours specified by Proposition K (one hour after sunrise to one hour before sunset at any time of the year). That is, although the project shadow trace (shadow fan) shows potentially shaded areas on Proposition K regulated properties, the project itself would not shade these due to the existing development configuration. Detailed shadow diagrams showing the maximum extent of project shadow toward potentially affected property are on file and available for public review at the Department of City Planning, 450 McAllister St.

# Open Space

The shadow studies show that the project would add no new shadow to any open space areas in the project vicinity.

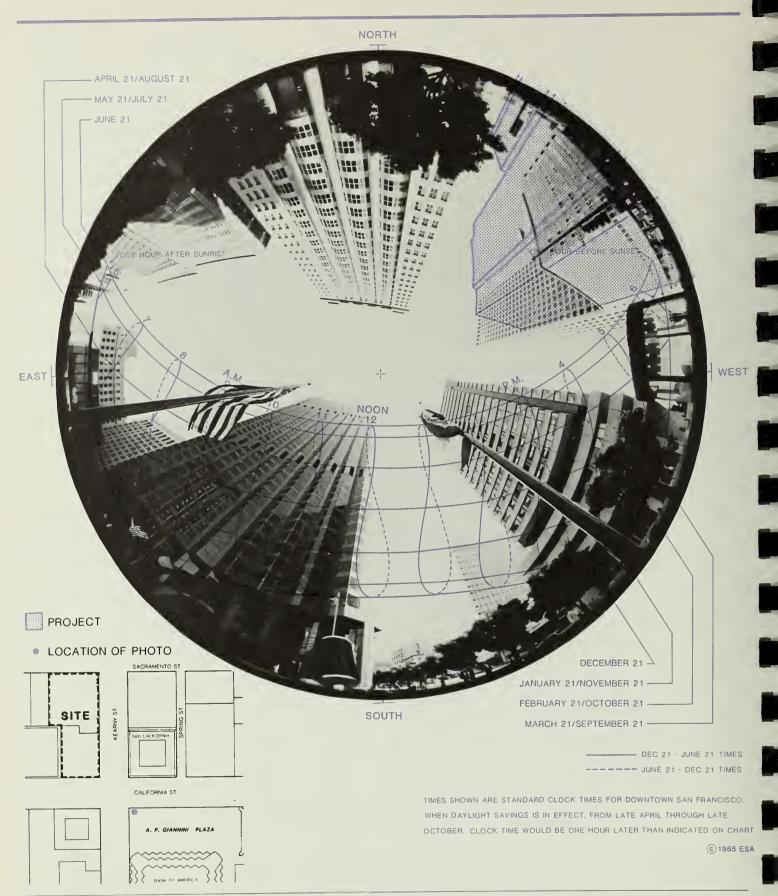
### Sun Path Analysis

An analysis of sunlight duration for two locations are shown in Figures 26 and 27, pp. 102 and 103; one location is in the A.P. Giannini Plaza and one on Sacramento St. between Kearny and Grant Sts. A diagram of the sun's yearly path was superimposed on fish-eye lens photographs of the sky. These diagrams accurately depict the time of day (expressed as local solar time, which is close to pacific Standard Time; during the time that Pacific Daylight Time is in effect, the sun location would be comparable to about one hour earlier than shown), throughout the year, that direct sunlight would reach each location, but creates an exaggerated visual image due to the distortion of the fish-eye lens. This technique differs from the shadow pattern analysis in that it does not predict the extent of shadow but rather the duration of sunlight and shade at one specific location. Horizontal lines indicate a specific date in the year (June 21, May 21/July 21 etc.), vertical lines indicate time of day. At the times of day and periods of the year, indicated by the horizontal and vertical lines, that the project outline falls on the diagram, the project would cast shadows at the point where the photograph was taken. Thus on Figure 26, in the A. P. Giannini Plaza for example, the project outline would fall within an area of the horizontal lines which is already covered by existing buildings, indicating that at the point where the photograph was taken the project would cast no new shadows. On

YEAR-ROUND SHADOW TRACE

600 California Street Federal Home Loan Bank of San Francisco

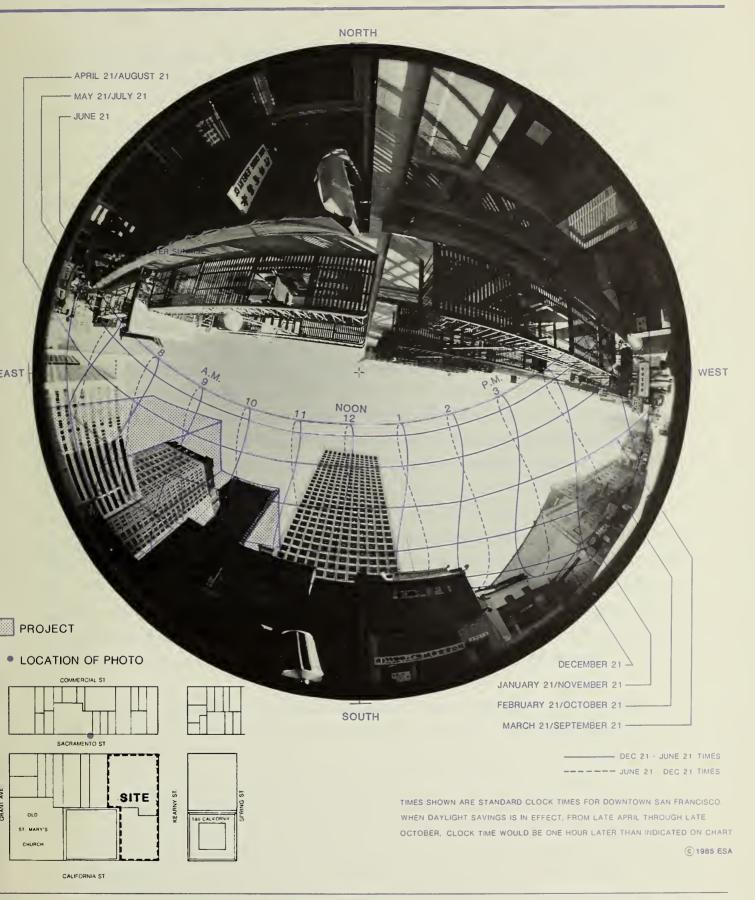
SOURCE: ESA



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

FIGURE 26 SUN PATH ANALYSIS ON A.P. GIANNINI PLAZA



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: ESA

FIGURE 27 SUN PATH ANALYSIS ON NORTH SIDE OF SACRAMENTO ST. Figure 27, taken on the north side of Sacramento St., the project outline does not cover the first or second horizontal lines, indicating that at the point where the photograph was taken, the project would cast no new shadow on June 21st or May 21/July 21; the project outline covers the third horizontal line (April 21/August 21) from about 7:50 a.m. to about 11 a.m.

#### WIND/1/

Prevailing winds in San Francisco are from the northwest, west-northwest, west and west-southwest. Wind tunnel measurements were made at 22 surface locations near the project site for three of the prevailing wind directions using a scale model of the site, the project and vicinity. The study included separate tests of northwest, west-northwest, and west winds under existing conditions and future conditions with the project and three alternatives in place. The tests excluded west-southwest winds, which previous wind tunnel tests have shown contribute little to pedestrian level winds in Downtown areas north of Market St./2/ The alternatives include; an alternative with a 9:1 FAR; an alternative requiring no exception to the Planning Code separation of towers or bulk requirements; and an alternative with a 50-ft. height along Sacramento St. with a 60-ft. setback above.

Wind test data were combined with records to predict the wind speed that would be exceeded 10% of the time at each test location. The predicted winds were then compared to the comfort and hazard criteria in the Planning Code, established in the Downtown Plan (See Appendix B, p. A-42, for a summary of the full wind analysis). Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time./3/

The locations of the measurement points and the results of the wind tunnel study, including compliance with the comfort criteria are summarized in Figures B-1 and B-2, pp. A-46 and A-47.

Wind speeds in the existing setting are from seven to 18 mph at the 22 locations tested. The comfort criterion for pedestrians is violated at nine of the 19 locations at which it applies and the comfort criterion for seating area is violated at all three locations at which it applies, as described immediately following. Strong winds, with speeds from 11 mph to 16 mph, occur along California St. between Quincy St. and Spring St., in A.P.

Giannini Plaza, and in St. Mary's Square; winds in those three areas exceed the pedestrian comfort criterion in nine locations and exceed the public seating comfort criterion in two locations.

Winds along Sacramento St. and mid-block on Kearny St., between California and Sacramento Sts., range from seven mph to 11 mph; winds there meet the pedestrian comfort criterion at all nine locations. The strongest existing wind, 18 mph, occurs on the rooftop of the existing 600 California St. building, where the wind exceeds the public seating comfort criterion and also violates the hazard criterion because that wind exceeds 26 mph for more than one hour annually.

The project would result in winds ranging from six to 16 mph. The project would cause winds to decrease at six of the 22 locations, be unchanged at 11 locations, and increase at five locations. The pedestrian comfort criterion would continue to be violated at nine locations, the seating area criterion would continue to be violated at three locations and the project would cause one new exceedance of the pedestrian comfort criterion. Along California St., winds would increase at one location and decrease at two locations; however, winds at the one location on California St. (in front of the Hartford Building) that now meets the 11 mph criterion would exceed that criterion. Winds in A.P. Giannini Plaza would be unchanged, and would continue to exceed the 11 mph criterion. Winds in St. Mary's Square would be unchanged at 12 mph at one location and decrease from 12 to 11 mph in the other; both locations would continue to exceed the 7 mph comfort criterion. Winds along Sacramento and Kearny Sts. would be increased at four locations, unchanged at three locations and decreased at two locations; the pedestrian comfort criterion of 11 mph would be met at all nine of those locations. The hazard criterion would not be violated at any location tested with the project in place.

The wind hazard criterion is exceeded between seven and eight hours per year on the rooftop of the existing 600 California St. Building (location 22) in the existing setting. With the project in place, wind speeds at that location would be reduced so that the wind hazard criterion would not be exceeded. The seating comfort criterion would continue to be exceeded there (see Mitigation Measures p. 141 for a measure that would reduce winds there to meet the criteria).

#### NOTES - Wind

/1/ This section is based on a study entitled, Wind Tunnel Study of the 600 California St. Building, October, 1986, prepared by Dr. Bruce White for Environmental Science Associates, Inc. A summary of the report is included in Appendix B, p. A-42; the

complete report is on file and available for public review at the Department of Planning, Office of Environmental Review, 450 McAllister St.

/2/ Supplemental Wind Report, 235 Pine St. Building, July 1985, prepared by Dr. Bruce White for Environmental Science Associates, Inc. The complete report is on file and available for public review at the Department of Planning, Office of Environmental Review, 450 McAllister St.

/3/ Equivalent windspeed is an hourly wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.

# E. TRANSPORTATION

The analysis below includes a brief summary (summaries) of the materials in the Downtown Plan EIR. This summarized material is incorporated by reference as follows:

VOLUME 1: FINAL EIR TEXT.

- I. SUMMARY. E. <u>Transportation and Circulation</u>; Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation, Mitigation (pp. I.E.1-I.E.6).
- IV. ENVIRONMENTAL SETTING AND IMPACTS OF THE DOWNTOWN PLAN.

  E. <u>Transportation and Circulation</u>; Introduction (pp. IV.E.1-IV.E.3); Setting (pp. IV.E.3-IV.E.20): Travel Demand Analysis, Transit, Traffic, Parking, Pedestrian Circulation; Impacts (pp. IV.E.20-IV.E.47): Travel Demand Analysis 1990 Impacts, 2000 Impacts; Transit 1990 Impacts, 2000 Impacts; Traffic 1990 Impacts, 2000 Impacts; Parking 1990 Impacts, 2000 Impacts; Pedestrian Circulation 1990 Impacts, 2000 Impacts, 2000 Impacts, 2000 Impacts.
- V. MITIGATION OF ENVIRONMENTAL IMPACTS (pp. V.E.1-V.E.30). E. <u>Transportation and Circulation</u>: Annual Growth Rate Limits, Measures Proposed as Part of the Downtown Plan.
- VI. ALTERNATIVES (pp. VII.E.1-VII.E.4). E. <u>Transportation and Circulation</u>: Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation.

VOLUME 2: APPENDICES (pp. J.1-J.38). J. <u>Transportation and Circulation Analyses and Methodologies</u>: Introduction, C-3 District Employer/Employee Survey Travel Demand Analysis, Future Transit Capacities, Service Vehicles, Pedestrian Circulation.

VOLUME 3: SUMMARY OF COMMENTS AND RESPONSES (pp. C&R 1-Z.4). Part 1: Responses.

The Downtown Plan EIR (Final EIR, EE81.3, certified October 18, 1984) is available for review at the Department of City Planning, the San Francisco Main Public Library, and various branch libraries.

#### DEMOLITION, EXCAVATION, AND CONSTRUCTION TRAFFIC/1/

During the projected 24-month construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and construction activity. Demolition would require about three months and excavation would require about five months; these activities would generate an average of ten truck movements per day in or out of the project site, between 9 a.m. and 3:30 p.m. Trucks would use Kearny St. to the Clay St. on-ramp of the Embarcadero Freeway to haul debris and excavation materials to disposal sites in Pleasanton and South San Francisco. Construction activities (steel erection and finishing) would also generate an average of 10 truck movements per day during the remaining 16-month period. Deliveries of materials would occur between 9 a.m. and 3:30 p.m.

Construction truck access to the site would be from Kearny St. The west sidewalk on Kearny St. would be closed for about 24 months and pedestrians would be routed through a protected walkway; the curb lane would be used for loading and unloading materials. Closure of the curb lane on the west side of Kearny St. along the project frontage during project construction would result in the loss of eight loading spaces (located on Kearny St.) and a reduction of capacity on Kearny St. during the p.m. peak-period. (There is a no-stopping restriction on the west side of Kearny St. from 4:00 a.m. to 6 p.m.)

The impact of construction truck traffic would be a slight lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of trucks. The reduction in capacity would slow movement of traffic, including Muni buses (the 9X-San Bruno Express and the 15-Third run along Kearny St. in front of the site). Lane blockage on Kearny St. by queued trucks, if it were to occur would reduce the capacity of this street and interfere with the operation of transit vehicles. Lane and sidewalk closures are subject to review and approval by the Department of Public Works.

Materials storage is proposed to be off-site, and would generate construction vehicle trips to the site; these trips are included in the above projections. Temporary parking demand from construction workers' vehicles, and impacts on local intersections from construction workers' traffic, would occur in proportion to the number of construction workers who would use automobiles. Any truck traffic from 7 a.m. to 9 a.m. or from 4 p.m. to 6 p.m. would coincide with peak-hour traffic, particularly at freeway access points, and would serve to worsen service levels. As noted above, truck traffic would be restricted to the hours of 9 a.m. to 3:30 p.m. which would avoid such peak period effects.

#### PROJECT IMPACTS

### Travel Demand

On the basis of land use trip generation factors, the project would generate about 5,095 net new person trip-ends (pte) per day./2/ Travel generated by the existing office uses on the project site (about 1,750 pte per day) has been subtracted from the total new travel (about 6,845 pte per day) from the site to give the net new travel from the project./3/ Travel from the parking uses at the site have not been subtracted from total new travel as these trips would continue to be made to the area. The trip generation calculations include travel to and from the project site by both visitors and employees of the project. Additionally, although expressed on a person trip-end basis, the trip generation includes all travel to and from the project in autos, service vehicles and trucks, on public transit and other modes (i.e., walking, bicycles, taxis, etc.). Projected outbound (peak commute direction) p.m. peak-period and peak-hour trips by mode expected to be generated by the project are shown in Table 4, p. 109. About 725 new outbound trips from the project would occur during the p.m. peak period, of which about 450 would occur in the p.m. peak hour./4/

Assignments to travel modes for the project have been made on the basis of modal splits from the Downtown Plan EIR (EE 81.3) for the years 1984 and 2000./5/ The 1984 modal split has been used for the purpose of identifying impacts at the single-project level (as opposed to impacts at the cumulative level). The year 2000 modal splits have been applied to the project travel for the purpose of comparing project travel with cumulative future travel demand on the transportation systems serving San Francisco. The modal

TABLE 4: PROJECTED OUTBOUND TRAVEL DEMAND BY MODE FROM 600 CALIFORNIA STREET (pte/a/)

	P.M. P	P.M. Peak Period/b/		P.M. Peak Hour /b/	
Travel Mode	1984	2000/c/	1984	2000/c/	
Drive Alone	115	100	75	60	
Car/Vanpool	100	95	70	75	
Muni	180	170	95	90	
BART	105	130	70	85	
AC Transit	35	35	25	20	
Samtrans	10	10	5	5	
SPRR (Caltrain)	15	15	10	15	
GGT Bus	25	30	15	15	
Ferry	5	5	5	5	
	125	125	75	75	
Other	10	10	5	5	
TOTALS (rounded)	725	725	450	450	
Muni BART AC Transit Samtrans SPRR (Caltrain) GGT Bus Ferry Walk Only Other	180 105 35 10 15 25 5 125 10	170 130 35 10 15 30 5 125	95 70 25 5 10 15 5 75	90 85 20 5 15 15 5 75	

<sup>/</sup>a/ Person trip-ends.

SOURCE: Environmental Science Associates, Inc.

splits used were derived from aggregate data for the C-3 District, the zoning district that contains the project site, and thus represent an average condition. The actual modal split for travel from the project may vary from the C-3 District average. However, because the travel demand forecasts used to derive the average modal split data implicitly include the travel from the project, application of the average modal split data to project travel has been assumed to be sufficiently accurate for purposes of comparison.

Parking demand was projected for the 600 California St. project on the basis of the estimated vehicle traffic generated by the project. The project's land uses would create net new demand for about 175 long-term spaces and about 15 short-term spaces, for an equivalent net new daily demand of about 190 spaces. The project would provide 232 parking spaces (48 short-term and 82 long-term, the project sponsor would apply for Conditional Use authorization for the remaining 102 spaces, to be determined as long-

<sup>/</sup>b/ The peak hour occurs during the two-hour peak period of 4 to 6 p.m.

<sup>/</sup>c/ The year 2000 modal split accounts for changes in travel behavior which are assumed to occur as a result of growth in downtown San Francisco.

and/or short-term by the City Planning Commission), 37 spaces less than now on site, for a deficit of 227 parking spaces relative to net new parking demand (269 existing spaces + 190 space demand = 459 spaces, - 232 proposed spaces = a deficit of 227 spaces).

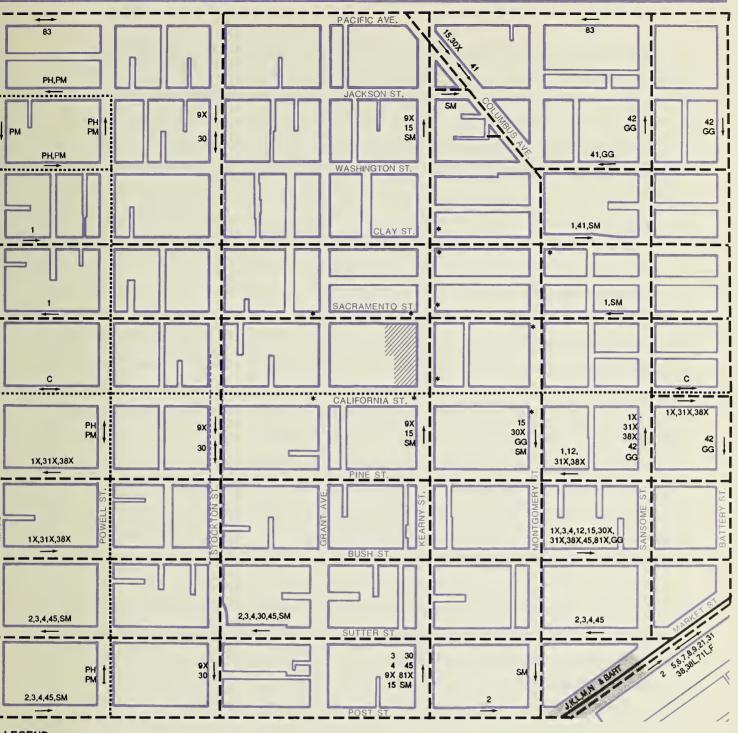
The project would respond to Objective 1, Policy 7 of the Transportation Element of the San Francisco Master Plan, to "seek means to reduce peak travel demand."/6/ As required by Section 163 of the City Planning Code, a member of the building management staff would be designated as a "transportation broker" to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

The project would not respond to policies of the Downtown Plan that discourage long-term parking in the downtown core (see p. 121).

# Local Transit

The closest Muni bus stops to the project site are as follows: on Sacramento St. at the northwest corner of its intersection with Kearny St., serving the 1-California; on Kearny St. at the northeast corner of its intersection with California St., serving the 9X-San Bruno Express and the 15-Third; on California St. west of its intersection with Kearny St., serving the C-Cable Car line. Muni Metro and BART service in the Market St. subway are accessible via the Montgomery St. station (about five blocks south of the site), and the Embarcadero Station (about six blocks east of the site). Figure 28, p. 111, shows transit routes in the project area. Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix C, Figures C-2, pp. A-53 to A-54.

During the p.m. peak hour in 1984, all of the transit agencies were found to be operating in Level of Service D or better, with the exception of BART Transbay where conditions were found to be at Level of Service F, and MUNI in the northwest and southwest corridors, where operations were found to be in LOS E. Table C-1, Appendix C, p. A-48,



#### LEGEND

BART AND MUNI METRO STATION

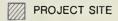
BART ROUTE AND MUNI METRO ROUTE

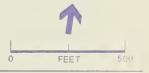
SURFACE TRANSIT ROUTE

CABLE CAR ROUTE

1.2,3,J,K,L ROUTE DESIGNATION AND DIRECTION
1X, 9X, 31X, AND 38X MUNI ROUTES INCLUDE
1AX, 1BX, 9AX, 9BX, 31AX, 31BX, 38AX,
AND 38BX ROUTES.

- GG GOLDEN GATE TRANSIT ROUTE
- SM SAMTRANS ROUTE
- \* BUS STOP (WITHIN ABOUT ONE BLOCK OF PROJECT SITE)





00 California Street Federal Home Loan Bank of San Francisco

OURCE: MUNI SAN FRANCISCO STREET & TRANSIT MAP, MARCH 1986; GOLDEN GATE TRANSIT BUS & FERRY SYSTEM MAP, MARCH 1986; SAMTRANS EXPRESS SERVICE, MAY 1986. FIGURE 28
TRANSIT ROUTES !N
THE PROJECT AREA

contains descriptions of the various Levels of Service for bus transit. In the p.m. peak hour, the project would generate about 95 new Muni trips and about 70 new BART trips outbound from the project site. Addition of the project p.m. peak-hour Muni riders to the existing (1984) Muni ridership would not increase the loading ratios on any corridors, and thus would not change the Levels of Service. The number of Muni riders from the project would not be sufficient to affect Muni operations in any of the four corridors. Addition of BART riders from the project to the existing BART ridership would increase the p.m. peak hour transbay loading ratio slightly but would not increase the westbay loading ratio; the Levels of Service on either transbay or westbay lines would not change.

## Transit Corridor Analysis

The project would contribute to increases in transit ridership in the major transit corridors leading from downtown San Francisco. Existing peak-period and peak-hour transit ridership would be increased by about 0.2%. A ridership increase of this magnitude would not be measurable against the day-to-day fluctuations in transit ridership and would not have a noticeable effect on transit levels of service.

Transit capacity increases have been projected in the Downtown Plan EIR based on each transit agency's Five-Year Plan. This is discussed on pp. IV.E.24-IV.E.30 of the Downtown Plan EIR; specific capacity increases for the year 2000 are identified in Appendix J, p. J.26 of the Downtown Plan EIR.

Cumulative development under the Downtown Plan to the year 2000 in conjunction with planned capacity increases of transit carriers would be expected to cause the following changes in transit Levels of Service during the peak period: Muni Northwest Corridor, E to D; BART Transbay, F to E; AC Transit, C to D; Golden Gate Ferry, B to A; Tiburon Ferry, A to B; and Caltrain, B to C (pp. IV.E.29 of the Downtown Plan EIR).

# **Project Transit Costs**

<u>Muni</u>. The estimated 1981–82 (most recent available) net marginal cost (or increase in the deficit for Muni operations) per additional ride is \$0.50./7/ This deficit-per-ride figure, because it is a marginal cost, is appropriate for small increases in Muni ridership (such as those requiring one or a few additional vehicle trips). Assessments of costs that would

result from cumulative development require the inclusion of additional cost factors and may be best projected using average costs./8/ It is reasonable to conclude that average costs would be significantly higher than marginal costs.

The project would generate about 84,700 peak-period peak-direction rides per year in the year 2000, which would generate a cost deficit to Muni of about \$42,340, assuming that the cost-per-ride deficit remains the same./9/ (This conclusion should be qualified because the Muni deficit-per-passenger-trip figure is based on 1981-82 data, and because the total project-generated deficit is calculated only for those riders who use Muni as their primary mode of transportation, excluding riders who would use a combination of transportation carriers, such as Muni and Caltrain. More recent data that would allow a more precise estimate of costs are not available.) The project would offset this deficit through its contributions to the General Fund, the Transit Impact Development Fee, and sales tax revenues.

On April 27, 1981, the San Francisco Board of Supervisors approved Ordinance 224-81 establishing the Transit Impact Development Fee (TIDF) to support additional operating costs and capital improvements for Muni transit services associated with new downtown commercial development. The ordinance established a one-time fee of up to \$5.00 per gross sq. ft. upon occupancy of new office space within the greater downtown area; the 600 California St. project site is located within the fee assessment area. The TIDF ordinance has been in litigation almost since its inception. On January 4, 1985, the San Francisco Superior Court issued a decision upholding the ordinance. On March 12, 1985, the plaintiffs, a group of downtown property owners, appealed. Money is being collected by the City pursuant to the ordinance, and deposited in an escrow account, pending resolution of the litigation. Under the ordinance, the project would generate about \$1.08 million in one-time fee revenues to Muni. The fee is intended to recover additional transit costs for the entire economic life of a building, and thus cannot be compared directly to the annual Muni deficit discussed above. The fees collected under the ordinance would, however, reduce the amount of General Fund revenue support necessary for existing and future Muni operations.

The project would also offset Muni's annual operating deficit attributable to the project through its contributions to General Fund revenues, which would be derived from a variety of taxes levied on the proposed project. In the past, a portion of General Fund revenues has been allocated to Muni. The historical level of contribution of General Fund revenues

to Muni could change, however, due to the recent court decision upholding the Transit Impact Development Fee. Because of the variable relationships of the sources from which Muni receives operating funds, the annual General Fund contribution from the project to Muni cannot be quantified.

General Objective 1, Policy 6 of the Transportation Element states as a goal to "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies." (p. 10) The project sponsor has agreed to participate in legally adopted funding measures for downtown transit funding, proportional to demand created by the project.

BART. For the fiscal year ending June 30, 1985, the average net operating deficit per passenger trip for BART was about \$1.20./10/ On the basis of about 66,000 rides per year in the year 2000, the estimated annual BART deficit attributable to the project would be about \$79,200, assuming that the cost per ride deficit is the same./11/ The project would generate a total of about \$17,300 in revenues to BART, including about \$6,500 in property tax revenues, and about \$10,800 from the 75% of the 0.5% transit sales tax allocated to BART. This amount does not include the remaining 25% of the 0.5% BART sales tax revenue distributed by MTC among BART, Muni and AC Transit. After subtraction of BART's revenues from sales and property taxes that would be generated by the project, the net operating deficit of BART due to the project would be about \$61,900. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

### Pedestrian Movements

Pedestrian entrances to the office lobby would be on Kearny and California Sts. Ground-floor retail space would have entrances on Kearny and Sacramento Sts. (see Figure 3, p. 26).

The project at full occupancy would generate about 220 additional pedestrians on sidewalks and crosswalks in the vicinity of the site during the 15-minute peak-period of the noon hour, and about 155 new pedestrians during the p.m. peak 15-minute period. Pedestrian travel destinations were estimated on the basis of projected major travel modes. Pedestrian trips were assigned to sidewalks and crosswalks on the basis of these destinations.

Operating conditions on sidewalks and crosswalks have been evaluated in terms of pedestrian flow categories or regimen, which relate the density of pedestrians in a specific time period (pedestrians per foot of clear sidewalk width per minute) to the quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk)./12/ Appendix C, Table C-2, p. A-52 shows the relationships among flow rates, walking speed, path choice, and interaction among pedestrians for each flow regime.

Appendix C, Figure C-1, pp. A-49 to A-51, shows photographs of sidewalk conditions for each flow regime. Typically, an upper limit for desirable conditions is 14 pedestrians per foot per minute (p/f/m), defined as crowded, although conditions as high as 18 p/f/m, a congested condition in which pedestrians are subjected to extreme crowding, have been documented./12/

Table 5, p. 117, summarizes pedestrian flow conditions on sidewalks and crosswalks adjacent to the site and at the intersections of Kearny and California Sts. and Kearny and Sacramento Sts. The sidewalks and crosswalks adjacent to the project site currently operate in open, unimpeded and impeded conditions during the noon-peak 15-minute period and unimpeded conditions during the p.m.-peak 15-minute period./13/ Conditions on the sidewalks and crosswalks adjacent to the project following addition of the project pedestrian travel to the existing (1984) pedestrian LOS would worsen from open to unimpeded at the Sacramento St. sidewalk during the noon 15-minute peak period, from unimpeded to impeded at the Kearny St. sidewalk and at the crosswalks across Sacramento St. at Kearny St. and across Kearny St. at California St. during the noon 15-minute peak period. P.M. peak conditions would worsen from unimpeded to impeded at the Kearny St. sidewalk and at the crosswalk across California St. at Kearny St. during the p.m. 15-minute peak period. Other sidewalks and crosswalks would not change from existing, unimpeded, conditions. There would continue to be adequate facilities for pedestrians on the sidewalks and crosswalks adjacent to the project site with these changes.

The project would have a 20-ft. curb-cut for the project garage and loading access. The potential for vehicle-pedestrian conflicts at the site would be increased as a result of trucks crossing the sidewalk to get to the loading docks, although the number of cars crossing the sidewalks to get to parking spaces would decrease slightly, because there be 37 fewer parking spaces.

In the year 2000, during the noon peak, sidewalks and crosswalks adjacent to the project would operate in the unimpeded and impeded ranges (see Table 5, p. 117). In the year 2000, crosswalks in the project vicinity would operate under the same conditions as the existing plus project case (see discussion above). The project pedestrian traffic would represent between 16% and 42% of the pedestrian volumes on the sidewalks, and between 14% and 32% of the pedestrian volumes on the crosswalks adjacent to the project block in the year 2000.

P.M. peak-hour operations in the year 2000 would also be in the unimpeded and impeded ranges, during the p.m. peak 15-minute period. Conditions would remain the same in the year 2000 as with existing plus project conditions. Project pedestrian traffic during the p.m. peak hour would represent between 12% and 34% of the pedestrian volumes on the sidewalks, and between 13% and 29% of the p.m. peak-hour crosswalk pedestrian volumes would be from the project in the year 2000.

Although as noted above, for some cases conditions would be in the impeded range, there would continue to be adequate facilities for pedestrians on the sidewalks and crosswalks in the study area.

## Local Intersection Traffic

The project would provide about 41 short-term and 191 long-term parking spaces in a three-level basement, with access from Sacramento St. A net total of 37 spaces would be eliminated (there are currently 269 spaces on the site). Project-related parking, loading and service vehicle traffic would result in increases in traffic at intersections in the downtown, including intersections in the immediate project vicinity. As the project would result in a net reduction of on-site parking spaces, the overall number of vehicle trips to and from the site would be reduced. Vehicles currently using the existing facility, and new vehicular traffic generated by the project that would not be accommodated by project parking, would be expected to use other parking in the downtown area; this traffic would be dispersed to intersections throughout the area.

The project would change garage access at the site. The project parking garage entrance would be on Sacramento St. and the exit would be on Kearny St.; the existing garage has entrances/exits on both Kearny and Sacramento Sts. Vehicles would enter the project

PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN (Project Side of Street) TABLE 5:

	Total Width (Feet)	Effective Width (Feet) /a/	Exi p/f/m/b/	Existing Flow /b/ Regimen/c/	Existing Plus Project Flow P/f/m Regimen	Project Flow Regimen	2000 p/f/m	500 Flow Regimen	Project Percent
Noon Peak /d/									
Kearny St. Sidewalk California St. Sidewalk Sacramento St. Sidewalk Crosswalk Across Sacramento St. at	14.5 10.0 13.5	10.0 10.75 6.8 13.5	1.3	Unimpeded Unimpeded Open Unimpeded	2.4	Impeded Unimpeded Unimpeded Impeded	2.8 1.7 0.8 3.1	Impeded Unimpeded Unimpeded Impeded	42% 16% 17% 14%
Kearny St. Crosswalk Across Kearny St. at Sacramento St. Crosswalk Across California St. at	10.5	10.5	0.9	Unimpeded Impeded	1.5	Unimpeded Impeded	3.7	Unimpeded Impeded	32% 18%
Kearny St. Crosswalk Across Kearny at California St.	14.5	14.5	7.8	Unimpeded	2.3	Impeded	2.9	Impeded	18%
P.M. Peak/d/									
Kearny St. Sidewalk California St. Sidewalk Sacramento St. Sidewalk Crosswalk Across Sacramento St.	14.5 10.0 13.5	10.0 10.75 6.8 13.5	1.3 0.6 1.1	Unimpeded Unimpeded Unimpeded Unimpeded	2.1 0.7 1.4	Impeded Unimpeded Unimpeded Unimpeded	2.5 1.6 0.9	Impeded Unimpeded Unimpeded Unimpeded	34% 17% 18%
at Kearny St. Crosswalk Across Kearny St. at	10.5	10.5	0.7	Unimpeded	1.1	Unimpeded	1.3	Unimpeded	29%
Sacramento St. Crosswalk Across California at	13.25	13.25	1.7	Unimpeded	2.9	Impeded	3.6	Impeded	13%
Crosswalk Across Kearny St. at California St.	14.5	14.5	1.2	Unimpeded	1.5	Unimpeded	1.9	Unimpeded	361

/a/ The effective width is the narrowest portion of the sidewalk and is calculated by subtracting the space taken by poles planter boxes, people standing at windows etc., from the total width.
/b/ Pedestrians per foot of effective sidewalk width per minute.
/c/ See Table C-2 and Figure C-2, Appendix C, for description of pedestrian flow regimens.
/d/ Peak 15-minute periods.

Environmental Science Associates, Inc. SOURCE:

garage via the Kearny/Sacramento Sts. intersection. Under existing conditions traffic entering the site does not need to pass through this intersection, but can enter the site directly from Kearny St. Therefore, the project would increase the number of vehicles passing through the Kearny/Sacramento Sts. intersection as all traffic entering the site would have to pass through that intersection. The intersection of Sacramento and Kearny Sts. presently operates at LOS C (see Table 6, p. 119). Level of Service descriptions are shown in Table C-3, Appendix C, p. A-56. In the year 2000, as a result of cumulative development, operations at this intersection are projected to deteriorate to LOS D (see Table 6, p. 119). The project alone would not cause the Level of Service (LOS) to change at this intersection.

Vehicles leaving the site would exit onto Kearny St. and continue northbound through the Kearny/Sacramento Sts. intersection or, turn left (west) on Sacramento St. and pass through the Grant Ave./Sacramento St. intersection. The project would result in a net reduction of on-site parking spaces. The overall number of cars from the site passing through the Grant Ave./Sacramento St. intersection would remain approximately the same (or decrease slightly), as all project traffic in the future would exit onto Kearny St. The Level of Service would remain at LOS B, at the Grant Ave./Sacramento St. intersection, with the addition of project-generated traffic (as shown in Table 6). In the year 2000, with the addition of cumulative traffic, operations at this intersection are projected to deteriorate to LOS C. The project would not contribute more than with existing conditions to the deterioration in the LOS.

# Freeway On-Ramp Analysis

Traffic operations at the intersection of Clay and Battery Sts. serving the freeway on-ramp nearest the project site are shown in Table 6. The project would incrementally contribute to traffic at this freeway on-ramp during the p.m. peak hour. This intersection currently operates in LOS C conditions (see Table C-3, Appendix C, p to A-56 for definitions of LOS). Operation at LOS C represents good conditions.

Project traffic alone would not change the LOS at the intersection of Clay and Battery Sts.; however, the V/C ratio would increase slightly. For the year 2000 projections, existing traffic volumes were increased by a 19% average growth factor based on the Downtown Plan EIR traffic analysis. The growth factor represents a worst-case, unrestrained auto demand condition for street traffic in the downtown and, as such, is

TABLE 6: PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS)/a/

	Ex	isting	Existing	+ Project	Downtown	Plan (2000)
Intersection	<u>V/C</u>	LOS	<u>V/C</u>	LOS	V/C	LOS
Sacramento & Kearny Sts.	0.72	С	0.74	С	0.81	D
Sacramento St. & Grant Ave.	0.67	В	0.69	В	0.76	С
Clay & Battery Sts.	0.74	С	0.75	С	0.81	D

/a/ Level of Service descriptions and relationship to V/C ratios are shown in Table C-3, p. A-56 of Appendix C.

SOURCE: Environmental Science Associates, Inc.

probably higher than actual traffic growth may be in the future in the downtown. Motorists confronted with increased delays on surface streets would be expected to alter their travel patterns to use less congested routes (to the freeway ramps) or to travel at different times (to avoid periods of traffic congestion). The intersection of Clay and Battery Sts. is at LOS C as noted. Peak-hour conditions at the intersection of Clay and Battery Sts. would be expected to deteriorate by the year 2000 as shown in Table 6 to LOS D. Operation at LOS D represents fair conditions. Expanded areas of traffic congestion would disrupt surface transit operations.

Muni operations would be adversely affected by increased congestion. Operation of Muni surface transit routes through the congested areas would be impeded; this would lead to decreased levels of Muni service since scheduled headways would not be met.

## Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving downtown San Francisco. Both the East Bay and Peninsula corridors would have excess

peak-hour demand that would not be met during the peak period. The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or ridesharing incentives be provided (p. IV.E.33 of the Downtown Plan EIR).

Traffic generated by the project would increase total traffic on major freeways during the p.m. peak period and the p.m. peak hour by about 0.3%. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes. Because the Bay Bridge p.m.-peak-hour eastbound traffic flow is functionally at capacity, the travel demand from the project would not be expected to increase the flows on the Bay Bridge in the peak hour; rather the East-Bay-bound auto traffic from the project would most likely compete with and possibly displace existing users of the Bay Bridge into later portions of the peak period. This competition for access would occur at the on-ramps to the Bay Bridge and any displacement of existing users to later time periods would depend on the time of arrival of project vehicles at the on-ramps. Some drivers would shift to carpools or transit as a result of cumulative displacement.

# OFF-STREET PARKING AND LOADING REQUIREMENTS AND DEMAND

# **Parking**

The project would create net new long-term parking demand for about 175 spaces and net new demand for about 15 short-term spaces for a total net new demand of about 190 equivalent daily spaces. The project would provide 232 independently accessible parking spaces, about 37 less than now on the site. Based on a parking turnover survey, 240 vehicles use the garage at 525 Kearny and 29 vehicles use the spaces located in the 600 California St. building. Demand from the project plus existing demand on site would result in an unmet demand of 227 equivalent daily spaces (190 + 269 = 459. 459 - 232 = 227 spaces).

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District. The short-term parking demand, while representing about 25% of the equivalent daily demand, is about 65% of the daily

vehicle travel. Although the equivalent daily demand would leave about 10% of the parking supply vacant, surges in short-term demand (more travel in one period than in another period) can cause temporary localized overloads of parking facilities within various portions of the downtown, even though parking may be available elsewhere in the downtown.

The Downtown Plan discourages "new long-term spaces in and around the downtown" (Downtown Plan, p. 126). The project would provide 82 long-term spaces and 48 short-term spaces and 102 yet to be determined as long- and/or short-term spaces.

Transportation Plan, portion of the Transportation Element of the Master Plan. Policy 1 encourages conversion of existing parking facilities to short-term use and rate structures which favor short-term parking. Policy 2 states that additional short-term parking facilities should be located in the designated parking belt outside the downtown core. Policy 3 discourages provision of long-term parking spaces in and around downtown and states that replacement of long-term parking spaces lost in the downtown should occur in areas peripheral to the downtown commercial district. Policy 6 seeks to organize and control traffic circulation in the downtown core by channeling vehicles into peripheral parking facilities. Policy 8 designates the downtown core as an automobile control area.

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent about 0.3% of the total demand from the C-3 District. As noted in the Downtown Plan EIR, the parking supply in the year 2000 has been assumed to increase to about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in that year if vehicular demand occurs as projected. However, the analysis in the Downtown Plan EIR for the year 2000 forecasts excess auto demand in the peak hour and the peak period. If the excess demand is accommodated on transit or ridesharing, then the overall parking demand would decrease from the above estimate by about 2,300 spaces (pp. IV.E.41 of the Downtown Plan EIR).

If the goals of the Downtown Plan are met, total parking demand in the year 2000 would be about 48,100 equivalent daily spaces, an increase of six percent over 1984. If the goals were achieved, there would not be a parking deficit.

As required by City Planning Code Section 155, nine spaces in the parking garage would be for handicapped parking. Additionally, Section 155(g) requires that parking spaces in the C-3 District shall maintain a rate or fee structure that encourages short-term use and discourages all-day parking; the parking rate schedule would be reviewed and approved by the Department of City Planning, or alternatively, the project sponsor would agree to be bound by a formula, to be developed by the Department of City Planning, which structures rates to favor short-term parking for the proposed 48 replacement short-term spaces. The project sponsor proposes to provide 48 short-term replacement spaces and 82 long-term spaces as part of accessory parking, and would not structure the fee schedule such that long-term parking would be discouraged for these spaces; the project would therefore not meet Section 155(g). No exception to 155(g) is allowable under Section 309; the project sponsor has requested an opinion from the Zoning Administrator as to whether a long-term rate structure could be allowed by the Variance procedure. The 102 remaining spaces, which would require Conditional Use authorization, would be reviewed by the Planning Commission, which would determine whether these spaces would operate as long- or short-term; if replacement short-term parking were not required by the Planning Commission as proposed, this parking would be a part of the Conditional Use application. The project sponsor would be required to provide 12 bicycle storage spaces in the parking garage.

### Loading

Table 7 p. 123, shows total service vehicle travel and average hourly service-vehicle demand for the project, based upon data published in Center City Circulation Program: Pedestrian Circulation and Goods Movement./14/ The project would generate about 68 service vehicle stops per day. Average hourly loading space needs are given in terms of spaces per hour per 10,000 gross square feet of building space; average demand for the project would be about 3.3 spaces per hour and peak hourly demand would be for about 4.1 spaces.

Under City Planning Code Section 152, the project would be required to provide three loading docks, or their equivalent, to serve the 312,700 gross sq. ft. of office space (0.1 spaces per 10,000 gsf = 3.1 spaces for 312,700 gsf of office space). Retail use in the project would be less than 10,000 sq. ft. and would therefore not be required to provide loading facilities. The project would have three loading docks with access from Sacramento St. The Code requires that the first loading dock have a width of ten ft., a minimum length of 25 ft. and a minimum vertical clearance of 12 ft.; each additional

TABLE 7: PROJECTED SERVICE-VEHICLE TRAVEL ATTRIBUTABLE TO THE PROJECT/a/

<u>Use</u>	Space (GSF)/b/	Daily Stops/ 10,000 sq. ft. of GSF/b/	Daily Stops	Spaces/Hour/ 10,000 sq. ft. of GSF/b/	Average Spaces/ Hour
Office Retail	312,700 7,900	2.1 3.0	66 2	0.1 0.2	3.1 <u>0.2</u>
TOTALS			68		3.3

/a/ Service-vehicle travel has been included in total travel calculated for the project. /b/ Gross square feet of floor space.

SOURCES: Environmental Science Associates, Inc.; Department of City Planning, 1980, Center City Circulation Program.

required space should be 35 ft. in length, 12 ft. wide and have a vertical clearance of 14 ft. The number of project loading spaces and configuration would be in conformance with the requirements in the code. The loading area would include a truck turntable which would allow trucks to turn around off street. Then, no backing-up of trucks would occur on Sacramento St.

### NOTES - Transportation

/1/ Construction data are based on a letter from Mike Ford, Swinerton & Walberg Co., dated May 7, 1986 and a phone conversation with Chuck Kuplin, Project Manager, Swinerton & Walberg Co., May 19, 1986. These are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister St.

/2/ San Francisco Department of City Planning, Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September 1983. This document describes the procedure used to calculate travel demand from the project. Daily trip generation rates of 18.1 person trip-ends (pte) per 1,000 gross sq. ft. of office space and 150 pte per 1,000 gross sq. ft. of retail space were used to generate travel from the project. The two trip generation rates are for independent land uses. When used to generate travel from more than one land use on the same site the rates may overestimate total travel to the site since a portion of the travel from each of the land uses may occur between land uses on the site and not leave the site. Such trips are referred to as "linked trips." The calculations for this project have not been discounted to account for linked trips and thus present a "worst-case" scenario. The September 1983 Transportation Guidelines are on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St.

/3/ Deduction of existing travel is per the Transportation Guidelines.

/4/ The percentages of travel occurring in the peak period and the peak hour are from the <u>Transportation Guidelines</u>. Total travel during each of the periods has been adjusted to show only outbound (leaving the downtown area in the peak commute direction) travel. The outbound travel consists of all of the work-related travel and half of the other (non-work) travel.

/5/ San Francisco Department of City Planning, Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984. This document is an analysis of projected growth in the C-3 Districts to the year 2000 under the Downtown Plan and five alternatives. The transportation analysis in the EIR includes projections of future modal splits for work and other (non-work) travel for the p.m. peak period, peak hour, and daily time periods. This document is on file with and available for public review at the Department of City Planning, 450 McAllister St.

/6/ San Francisco Department of City Planning, January 1983, <u>Transportation</u>, an <u>Element</u> of the Master Plan.

/7/ This deficit-per-ride figure is based upon information provided in: Touche Ross & Co., Transit Impact Development Fee Cost Study, Fiscal Year 1981-82, July 1983, Corrected September 9, 1983, and consultation with Bruce Bernhard, Chief Financial Analyst, San Francisco Municipal Railway, telephone conversations, October 11, 1984, and March 20 and May 13, 1985. The calculation of the peak-period marginal deficit (additional cost per ride minus additional revenue per ride) was done by ESA.

/8/ According to Muni, the appropriate technique for determining the costs to Muni of cumulative development is an average cost analysis which would include both capital and operating costs. Application of this technique, however, is limited because relevant capital cost data are not available from Muni. Further, capital costs are difficult to allocate on a person-trip basis, as capital expenditures occur from time to time in large amounts, not necessarily annually. The established method of allocating capital costs is through depreciation, which is based on historical depreciation costs, not replacement costs. Such an estimate would be low in comparison with the costs of new capital improvements required for a single passenger trip. The use of existing capital cost data would underestimate future capital cost needs. Existing Muni accounting statistics do not enable future capital costs to be calculated on a per-passenger-trip basis (Bruce Bernhard, Muni Chief Financial Analyst, telephone conversation, March 25, 1985).

/9/ The deficit due to the project would be: 336 peak-period trips per day x 252 working days per year x \$0.50 deficit = \$42,340. The cost deficit estimate is based on the assumption that essentially all vehicles are operating at capacity during peak periods and additional riders would require new vehicle trips. It was assumed that during off-peak periods, all vehicles operate with excess capacity, resulting in an average off-peak marginal cost of zero. These cost estimates are appropriate for project costs to Muni of a single office building. Assessments of costs that would result from cumulative development require the inclusion of additional cost factors and may be best projected using average cost data. Muni does not have data that would enable it to estimate the average cost per passenger trip. It is reasonable to conclude that average costs would be significantly higher than marginal costs.

/10/ Ward Belding, Supervisor, Office of Research, BART, telephone conversations, September 27, 1985. The \$1.20 average deficit per trip is based on all operating costs and revenues for the entire system and is not specific to San Francisco trips. Available data from BART do not enable peak and non-peak period costs to be differentiated.

/11/262 BART trips per day x 252 days/year x \$1.20 = \$79,200.

/12/ Pushkarev and Zupan, 1975, Urban Space for Pedestrians, MIT Press, Cambridge, Mass., pp. 85 to 117.

/13/ Pedestrian counts were made by Environmental Science Associates, Inc. on May 19 (Monday) and 20 (Tuesday), 1986 from 12 p.m. to 1 p.m. and from 4:30 p.m. to 5:30 p.m.

/14/ San Francisco Department of City Planning, 1980, <u>Center City Circulation and Goods</u> Movement, Working Papers 1, 2 and 3, and Final Report.

## F. AIR QUALITY

The analysis below includes a brief summary (summaries) of the material in the Downtown Plan EIR. This summarized material is incorporated by reference as follows:

VOLUME 1: FINAL EIR TEXT.

- SUMMARY (pp. 1.1.1-I.1.31). I. <u>Air Quality</u>; Short-term Construction Impacts,
   Long-Term Operation Impacts: Pollutant Emissions, Ozone Concentrations, Carbon Monoxide Concentrations, Total Suspended Particulate Concentrations, Nitrogen
   Dioxide Concentrations, Sulfur Dioxide Concentrations.
- IV. ENVIRONMENTAL SETTING AND IMPACTS OF THE DOWNTOWN PLAN. 1. Air Quality; Setting (pp. IV.1.1-IV.1.9): Introduction, Existing Regional and Local Air Quality: Ozone, Carbon Monoxide, Total Suspended Particulate, Nitrogen Oxides, Sulphur Dioxide; Air Quality Planning and Forecasting: Ozone Modeling for the 1982 Bay Area Air Quality Plan, Carbon Monoxide for the 1982 Bay Area Air Quality Plan, Carbon Monoxide Modeling for Downtown San Francisco, Other Pollutants. Impacts (pp. IV.1.9-IV.1.19): Short-term Construction Impacts; Long-Term Operation Impacts Compatibility with Air Quality Plans, Pollutant Emissions; Ozone Concentrations 1990, 2000; Carbon Monoxide Concentrations 1990, 2000; Total Suspended Particulate Concentrations 1990, 2000; Nitrogen Dioxide Concentrations 1990, 2000; Sulphur Dioxide Concentrations 1990, 2000.

V. MITIGATION OF ENVIRONMENTAL IMPACTS (pp. V.I.1-V.I.2). Annual Limits on New Commercial Development in the City; Measures Identified by this Report.

VOLUME 2: APPENDICES (pp. O.1-O.9). Calculations of Air Pollutant Emissions and Carbon Monoxide Concentrations.

VOLUME 3: SUMMARY OF COMMENTS AND RESPONSES (pp. C&R 1.1-11). Part 1: Responses.

Upon completion, the project would affect air quality in two ways. Emissions would be generated by project-related traffic, and by combustion of natural gas for building space and water heating. Transportation sources would account for over 95% of project-related emissions.

The California Legislature mandated a biennial Inspection and Maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on predicted reduction in hydrocarbons and CO of 25% in vehicles covered, a reduction in total motor vehicle-generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor vehicle-generated hydrocarbons would be 17%; the reduction in total regional hydrocarbon emissions would be about six percent. Vehicle emission factors used in the model in the Downtown Plan EIR did not take the I/M program into account. To account for reductions from the I/M program, revised emission factors have been input into the revised Modified Linear Rollback (MLR) for this project. This is the same version of the revised MLR method which was developed for the Downtown Plan EIR. By not quantifying predicted reductions from the I/M program, CO emissions were over-predicted in the Downtown Plan EIR.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions, and are compared with ambient standards in Table 8, p. 127. In 2000, the average vehicle is expected to emit less carbon monoxide (CO) than in 1984 due to ongoing state and federal emissions controls.

TABLE 8: EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

			Concentrations (ppm)/a/		
Intersection	Averaging Time	1984	Downtown Plan 2000/b/		
Grant & Sacramento	1-hour	8.7	4.8		
	8-hour	6.8	3.6		
Battery & Clay	1-hour	13.0	7.0		
	8-hour	10.3	5.6		
Kearny & Sacramento	1-hour	10.3	5.7		
	8-hour	8.0	4.6		

/a/ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, and 4.2 ppm for one hour and 3.0 ppm for eight hours in 2000. Underlined values are in violation of the state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight hour state and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board EMFAC6D computer model, as published in the BAAQMD's Guidelines, November 1985. These emissions take into account the reduction in CO as a result of the ongoing Statewide Inspection/Maintenance Program.

/b/ Based on the growth forecast methodology contained in the Downtown Plan EIR. The project would be contained within this forecast.

SOURCE: Environmental Science Associates, Inc. and Downtown Plan ElR.

Currently, the eight-hour CO standard is estimated to be violated at the Battery and Clay and Kearny and Sacramento intersections. CO concentrations are predicted to be less in 2000 than in 1984 and would not violate the standards at this intersection in this future scenario.

Table 9, p. 128, shows projected daily emissions of pollutants in 2000 from project-generated traffic, projected daily emissions in 2000 for C-3 District development projected by the Downtown Plan EIR, and total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan. As CO concentrations in downtown San Francisco are almost entirely due to motor vehicles, future CO levels are predicted to be lower than they would be without an I/M program. Thus, actual concentrations are

TABLE 9: PROJECTED DAILY POLLUTANT EMISSIONS

		Emissions (tons per day) /a	/
Pollutant	Project 2000/b/	Downtown Plan 2000/c/	Bay Area 2000/d/
Hydrocarbons	0.005	0.6	560
Nitrogen Oxides	0.006	0.8	492
Carbon Monoxide	0.044	6.6	2,170
Particulates	0.006	1.3	764
Sulfur Oxides	0.001	0.1	225

/a/ Project and Downtown Plan emissions calculated using BAAQMD vehicle emission factors which do not take into account the inspection and maintenance program. Emissions of HC, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.

/b/ Based upon a weighted daily average of 13.5 miles traveled.

/c/ Incremental emissions of C-3 District development, per The Downtown Plan EIR, Vol 1, Table IV.1.2, p. IV.I.12.

/d/ Air Quality and Urban Development, Guidelines for Assessing Impacts of Project and Plans, November 1985, prepared by the Planning Division of the Bay Area Air Quality Management District.

SOURCE: Environmental Science Associates, Inc. and Downtown Plan EIR.

expected to be lower than CO and HC emissions shown in Table 9, because the Downtown Plan EIR did not take the I/M program into account. The project would contribute about one percent to the total emissions generated by Downtown Plan development, in 2000.

Emissions of total suspended particulates (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility./1/

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. Emissions

Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Cumulative downtown development is projected by the Downtown Plan EIR potentially to result in a violation of the eight hour CO standard at the Brannan/Sixth intersection as analyzed therein. Using the revised emission factors which account for the I/M program in the revised version of MLR contained in the Downtown Plan EIR, the City no longer predicts violations of CO standards at the Sixth and Brannan intersection, or other intersections which have been modeled in the greater downtown. Based on the above, cumulative downtown development would not conflict with objectives of the 1982 Bay Area Quality Plan regarding CO.

### NOTE - Air Quality

/1/ State particulate standards were changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be.

### G. CONSTRUCTION NOISE

Construction noise impacts are discussed in the Initial Study prepared for the project (see p. A-14 to p. A-17). The Initial Study/EIR Requirement determined that no further study of this topic was required. Subsequent to publication of the Initial Study, it was determined that construction noise as it might relate to the Nam Kue School, required further analysis. The results of that analysis are presented here.

Ambient noise in the project vicinity is typical of noise levels in downtown San Francisco, which are dominated by vehicular traffic, including trucks, cars, Muni buses and emergency vehicles. Sidewalk noise measurements taken during the weekday p.m. peak commute time show average noise levels of about 75 dBA  $L_{eq}$  on the corner of Sacramento and Kearny Sts./1,2/ The Downtown Plan EIR indicates day-night average noise levels ( $L_{dn}$ ) of about 76 dBA along Kearny St. and 73 dBA along Sacramento St. in the vicinity of the project./3/

As noted in the Initial Study on p. A-16, project construction would take place over about 24 months, and would increase noise levels in surrounding areas. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener. To estimate probable noise impacts, this analysis assumes typical equipment and construction techniques. Table 10, p. 131, shows typical exterior noise levels associated with the different phases of construction (see Appendix E, p. A-60, for a table of typical noise levels found in the everyday environment). Interior noise levels at 50 ft. from the noise source would be about 10 to 15 dBA less than those shown in Table 10. Closed windows would reduce noise levels by about 15 to 25 dBA below those shown in the table.

As noted in the Initial Study, construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the City Police Code).

Project construction would take place in several stages: demolition and clearance, excavation, foundation preparation, frame erection, and exterior finishing. Throughout the construction period there would be truck traffic to and from the site, initially hauling away debris and dirt and then delivering building materials. The project would not require pile driving.

Most structures in the project vicinity are office buildings, except buildings across Sacramento St., about 70 feet west of the project site, where residential units occupy the upper floors on the north side of Sacramento St., and the Nam Kue school, on the south side of Sacramento St., about 70 ft. west of the site's west property line. During excavation and exterior finishing, noise levels inside the school could reach 66 dBA with windows open and 61 dBA with windows closed; exterior noise levels would be about 76 dBA./4/ Noise at levels greater than 55 dBA (for children) 60 dBA (for adults) can interfere with normal speech and concentration; noise levels greater than 65 dBA (for children) or 70 dBA (for adults) would require workers, residents, and students and teachers in the school to close windows or raise their voices to communicate. Classroom operations can be affected in a noise environment greater than 55 dBA; the noise renders intelligibility difficult and causes distraction./5/ Classes are held at the Nam Kue school, Monday through Friday from 4 p.m. to 6 p.m./6/ There is an outdoor play area at the southern boundary of the school; it is approximately 45 ft. by 25 ft., and is surrounded by adjacent buildings. Outdoor noise levels in the play area could

TABLE 10: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET FROM THE SOURCE

Construction Phase	Duration of Phase/a/ (months)	Average (Energy Equivalent) Noise <u>Level (</u> L <sub>eq</sub> in dBA)
Ground Clearing	3	84
Excavation	5	89
Foundations	1	78
Steel Erection	3	85
Exterior Finishing	12	89

/a/ Mike Ford, Swinerton and Walberg, Co., letter May 7, 1986.

SOURCE: Bolt, Beranek and Newman, December 31, 1971, Noise from Construction Equipment and Home Appliances, U.S. Environmental Protection Agency.

reach as high as 76 dBA, (including a 10 dBA reduction for intervening building noise attenuation). Some project noise might be audible if construction were to occur during school hours; it would probably not be disruptive, as existing noise levels are about 73 dBA, L<sub>dn</sub>. According to the Downtown Plan EIR (EE81.3) the background noise level (L<sub>dn</sub>) on this section of Sacramento St. was 73 dBA in 1984 and would be 73 dBA in 2000./3/

No additional developments are planned in the project area that would coincide with the construction schedule of the proposed project. In summary, during the majority of construction activity, noise levels would be expected to be above existing levels in the area. There would be times, particularly during the operation of impact wrenches, when noise would interfere with indoor activities in the Nam Kue school on Sacramento Street, if construction were to occur during school hours (see also the Initial Study, pp. A-16 to A-17 for noise affects on adjacent residential and office uses).

For mitigation measures, to reduce construction noise impacts of the project, see the Initial Study p. A-33 and the Mitigation Chapter pp. 146 to 147.

In addition to these measures to reduce construction noise, the sponsor would hire an acoustical expert to monitor the interior noise levels of the Nam Kue School, on one

occasion, to determine which equipment would result in an interior noise level in excess of 55 dBA with windows closed; use of such equipment would be prohibited between 4 p.m. to 6 p.m., work days, when classes are in session, as part of the construction contract (see Mitigation Measures p. 146).

#### NOTES - Construction Noise

/1/ Noise measurements were taken on Tuesday, September 17, 1986 at 4:30 to 4:45 p.m. with a Metrosonics db-306A Metrologger with calibration prior to each measurement by ESA. Measurement location was on the sidewalk on the southwestern corner of Kearny at Sacramento St.

/2/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.  $L_{eq}$ , the equivalent noise level, is the average energy content of the noise over a given time period.  $L_{dn}$ , the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

/3/ San Francisco Department of City Planning, <u>Downtown Plan Environmental Impact Report (EIR)</u>, EE81.3, certified October 18, 1984, Volume 1, pp. IV.J.1-19, particularly Table IV.J.2, pp. IV.J.9-10.

/4/ These calculations assume a 3 dBA attenuation due to distance, a 10 dBA attenuation due to intervening buildings and an additional ten to 15 dBA reduction for indoor noise levels.

/5/ Information on Levels of Environmental Noise Requisite of Project Public Health and Welfare with an adequate Margin of Safety, U. S. Environmental Protection Agency, March 1974.

/6/ Tsung P. Tsho, Principal, Nam Kue School, interview September 17, 1986.

### H. EMPLOYMENT

#### **EXISTING EMPLOYMENT**

Approximately 373 employees currently work at the project site, of which 368 are employees of the Federal Home Loan Bank of San Francisco, the project sponsor./1/ Employees include office, retail/service, garage and maintenance workers. Table 11, p. 133, identifies the gross floor area by use and tenants currently on-site. Almost all of the total existing office area on-site is occupied by the Federal Home Loan Bank; the remainder is occupied by Hertz Rent-A-Car.

# Direct Project-Related Employment

The project would accommodate growth of office and retail employment in the C-3 District. The Federal Home Loan Bank would occupy a majority of the project office, space; it is expected that office businesses providing management, technical, and professional services would occupy any remaining portion of the space. No tenants have been secured. Over time, the project is expected to be characteristic of all C-3 District office buildings occupied by a mix of corporate and business service firms. Therefore, average overall density factors for the C-3 District (gsf of space per employee) are used to estimate the employment characteristics of the project, as opposed to using any particular tenants which may or may not remain in the building over the long term.

Demolition for construction of the new project would result in the displacement of the existing Hertz Rent-A-Car business and employees. Existing Federal Home Loan Bank employees would be temporarily relocated to another building which is as yet undetermined.

In total, there would be about 1,220 workers at the project site, consisting of 1,167 office workers, 23 retail workers, 26 building maintenance/security workers and four parking garage attendants (see Table 11, p. 133). The additional space represented by the project would accommodate about 847 additional employees in the C-3 District. There would be a net increase of about 798 office employees, a net increase of about 23 retail employees, and a net increase of about 26 building maintenance/security employees; the number of parking garage attendants would remain the same./2/ The difference between the estimate of total employment and the estimate of additional employment is accounted for by the demolition of the existing space on the project site.

Total permanent employment in the C-3 District is forecast to be about 372,000 in the year 2000 under the Downtown Plan. This forecast represents an increase of about 90,000 C-3 District workers between 1984 and 2000. Total employment in the project would represent about 0.3% of total C-3 District employment in 2000. The additional C-3-District employment accommodated in the project would represent about 0.2% of total C-3 District employment in 2000 and about one percent of the forecast growth in permanent employment.

TABLE 11: EXISTING USES AT PROJECT SITE AND ESTIMATES OF PROJECT EMPLOYMENT

		Q	Gross Floor Area (sg	uare feet)			
Address	Tenant	<u>Use</u>	Office	Parking			
EXISTING USES							
600 California	Federal Home Loan Bank of San Francisco	Bank (office with basement parki	95,800 ng)	8,386			
533 Kearny	Hertz Rent- A-Car	Office	800	-			
551 Kearny	Federal Home Loan Bank of San Francisco	Parking Garage	-	60,000			
TOTAL	Jan 1 Tanetseo		96,600	68,386			
TOTAL PROJECT EMPLOYMENT							
		Building	Space per	Estimated			
Use		Space	Employee /a/	Employment			
Office		312,700	268 /b/	1,167			
Retail		7,900	350	23			
Sub-Total		320,600		1,190			
Building Maintenance/Security		320,600	12,500	26			
Parking Garage TOTAL		$\frac{90,600}{411,200}$		$\frac{4}{1,220}$ /c/			
CITE		111,200		1,220			

#### NET ADDITIONAL EMPLOYMENT

	Existing	Net Additional
<u>Use</u> Office	Employment	Employment
Office	369 /d/	789
Retail		23
Sub-Total	<u>369</u>	821
Building Maintenance/Security	<del></del>	<del>26</del>
Parking Garage	4	
TOTAL	373	847

/a/ Gross sq. ft. of building space per employee. C-3 District employment density factors from Downtown Plan EIR, EE81.3, certified October 18, 1984. (see note /2/ at end of section.)

/b/ Density for all office activities in 2000, including both management/technical office and trade/customer service office, and incorporating an average 5% vacancy factor. /c/ The proposed parking garage would be self serve and would maintain the same number of attendants as the existing garage.

/d/ 364 persons work for the Federal Home Loan Bank, and five persons work for Hertz Rent-A-Car at present.

SOURCE: Federal Home Loan Bank, and ESA

About 2,000 additional jobs in the Bay Area would result from the employment multiplier effect of project operation. Construction of the new project would require about 130 person-years of construction labor. Construction labor for the project would represent about 0.2% of the total person-years of construction labor forecast for the C-3 District from 1984 through 2000. About 220 additional person-years of employment would be generated in the Bay Area, as a result of the multiplier effect of project construction./3/

The forecast of cumulative C-3-District employment to the year 2000 (of which the proposed project employment is a part) consists of both "basic" economic growth (activities supported by sales to buyers outside the area) as well as the part of the "multiplier" of this growth that occurs in the C-3 District. The multiplier is the economic growth that results from business purchases and the spending of employees and employee households. The project could include both businesses that generated additional C-3-District economic activity and businesses that were part of the multiplier effect of other C-3-District activities.

In addition to the part of the multiplier effects that occurs in the C-3 District, there would be other economic activity generated by business and employee household spending elsewhere in the City and the rest of the region.

#### NOTES - Employment

/1/ Information on number of employees provided by the Federal Home Loan Bank of San Francisco, September 15, 1986, Raymond Terwilliger, Jr., copy of letter is on file with the Department of City Planning, 450 McAllister St.

/2/ Employment in the project is calculated from the estimates of space by use in the project using employment density factors (gross sq. ft. of space per employee). The employment density factors are those developed in the analysis for the Downtown Plan EIR. (See Downtown Plan EIR, Table IV.C.2, p. IV.C.6 and Table H.3, pp. H.21-H.22.) The office employment density factor used here (268 gross sq. ft. per employee) is for total C-3 District office in the year 2000, including both management/technical office and trade/customer service office business activities. It is different from the density factor of 255 gross sq. ft. of occupied space per employee described in the Downtown Plan EIR (see p. IV.C.45), however, because it incorporates an average office vacancy rate of five percent. (See Downtown Plan EIR, note 7, pp. IV.C.55-IV.C.56). This density factor (as well as the other for occupied space) is consistent with the Downtown Plan EIR forecasts of employment and space which incorporate an average office vacancy rate of 5%.

The year 2000 density factors are used so the project can be set in the context of cumulative C-3 District development to 2000. Under the Downtown Plan, office employment densities are expected to increase over time as businesses take steps to use space more efficiently when faced with higher rents. This is reflected in the office employment density used in this EIR. (See Downtown Plan EIR, pp. IV.C.45 and notes 28, 29 and 30, pp. IV.C.60-IV.C.61.)

/3/ Indirect employment projections are based on A 1980 Hybrid Input-Output Model for the San Francisco Bay Region, Association of Bay Area Governments, April 1984. The multipliers used are averages of the employment multipliers contained in that model.

# I. RESIDENCE PATTERNS AND HOUSING

The following paragraphs summarize material from the Downtown Plan EIR. This summarized material is found on the following pages of the Downtown Plan EIR which are incorporated by reference:

Volume I: Final EIR text. Pages IV.D-40 through 98

Volume II: Appendices. Appendix I

Volume III, Part 1: Responses. Section D

# Housing Market Impacts

The Downtown Plan EIR analyzed the effects of C-3 employment growth on future housing market conditions. That analysis was based on the forecasts of C-3 district and citywide employment growth as estimated by City consultants, considered in the context of regional population growth, regional employment growth, demographic changes including changes in household composition and labor force participation, and an increased housing supply, all as projected by ABAG. Growth in C-3 employment would result in more households with more income to pay for housing, adding to already strong demand for housing in San Francisco. With forecast C-3 district employment growth, there would be approximately 30,000 more C-3 district workers living in San Francisco. While there would be an increase in San Francisco's housing supply, the private market is expected to be unable to supply much new housing that would be affordable to a large segment of the City's population.

The age distribution of the population, household sizes and incomes, mobility and migration, lifestyle preferences, land availability, land use policies, construction costs and general economic conditions will also have implications for the housing market. As a result of these factors, as well as employment growth in the C-3 district, housing in San Francisco is expected to remain more costly relative to household incomes than it has been in the past. Some new C-3 district employees would decide not to move to the City, and some existing City residents would move out of the City, for a variety of reasons only

one of which would be higher housing costs. As a result of San Francisco's continuing high housing costs, some people would pay more for the same quality housing, and others would end up with lower quality housing; many would allocate a larger share of their resources for housing. Generally, these impacts would result in the greatest sacrifices from those households with fewer financial resources.

# Residence Patterns

The C-3 district contains the greatest concentrations of the types of jobs most likely to be filled with workers who commute from outside of San Francisco. However, C-3 district workers did not represent large percentages of the total number of employed residents of the other Bay Area counties in 1980/1981, and these percentages are expected to be very similar, although somewhat larger, in 2000. As shown on Table IV.D.20, page IV.D.81h of the Downtown Plan EIR, 6.7% of all employed Alameda County residents in 1980/1981 worked in the C-3 district. This would change to 7.8 to 7.9% in 2000. Marin County has the highest concentration of C-3 district workers: 13.7% of employed Marin County residents work in the C-3 district. This figure would grow to 15.2 to 16.1% in 2000. Santa Clara County has the lowest concentration of C-3 district workers: 0.3% of employed Santa Clara County residents are work in the C-3 district. This percentage is not expected to change in 2000.

Because C-3 district employment growth is one of many factors affecting future housing market conditions, and because the increased numbers of C-3 district employees residing outside of San Francisco, when considered in the regional context of employment growth, are not great, the City Planning Commission, in certifying the Downtown Plan EIR, did not find a significant impact on the region's housing supply as a result of cumulative downtown growth.

# J. GROWTH INDUCEMENT

The project would include about 312,700 gross sq. ft. of office space (a net increase of about 216,100 gross sq. ft.) and about 7,900 sq. ft. of retail where there is now none. Employment at the site would increase from about 373 to about 1,220 people, an increase of about 847. The Federal Home Loan Bank of San Francisco would occupy the majority of the proposed building area. Occupants of the remaining portion of the proposed project

are not known, but could include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project were fully leased, however, and the office space of the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco could increase by about 847 jobs due to the project. Additional jobs also would be supported indirectly in San Francisco through the multiplier effect./1/

If marketed successfully, the project, together with other planned office development, could have growth-inducing effects by demonstrating a market for office space in this area. This could thereby encourage similar development on lots (including smaller lots assembled for development) currently occupied by low- or mid-rise buildings containing business support services. Such a demand would reflect the trend of growth in service sector and headquarters office activities and employment in San Francisco. Increases in downtown office space and employment would contribute to continued growth of local and regional markets for housing, goods, and services. These effects would be less extensive were the vacancy rate for office space to continue to rise. Should this occur, projected increases in downtown employment would be less and the growth in demand for goods, services and housing would be lower.

It is expected that some downtown workers, including some in the project, would want to live in San Francisco. Employment growth, however, would not be reflected directly in increases in demand for housing and city services to residents, as some new jobs would be held by individuals who already live and work in the City; who live in the City but previously either did not work, or worked outside the City; who live in surrounding communities; or by those unable to afford or locate housing in the City. New downtown workers would also increase demand for housing in other parts of the Bay Area.

Any net increase in employment downtown would increase the demand for retail goods and services in the area. The project would intensify this demand by increasing the amount of employment on the site. Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development. The project would provide 7,900 sq. ft. more retail than now on the site; there is now none.

The project would be built in a developed urban area, and no expansion to the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.

# NOTE - Growth Inducement

/1/ Indirect employment projections are based on A 1980 Hybrid Input-Output Model for the San Francisco Bay Region, Association of Bay Area Governments, April 1984. The multipliers used are averages of the employment multipliers contained in that model.

## V. MITIGATION MEASURES

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been, or would be, adopted by the project sponsor or project architects and contractors and thus are proposed; some are under consideration; and some have been rejected. Implementation of some may be the responsibility of public agencies. Measures under consideration or measures rejected by the sponsor may be required by the City Planning Commission as conditions of project approval.

Each mitigation measure and its status are discussed below. Where a measure has not been included in the project, the reasons for this are discussed.

Mitigation measures below preceded by an asterisk (\*) are from the Initial Study (see Appendix A, p. A-2 to A-41).

# VISUAL QUALITY

#### MEASURE PROPOSED AS PART OF THE PROJECT

\*- In order to reduce obtrusive light or glare, the project sponsor would use no mirrored glass on the building.

# **CULTURAL RESOURCES**

#### MEASURES PROPOSED AS PART OF THE PROJECT

The sponsor would retain the services of an archaeologist. The Environmental Review Officer (ERO) in consultation with the President of the Landmarks Preservation Advisory Board (LPAB) and the archaeologist, would determine whether the archaeologist should instruct all excavation and foundation crews on the project

site of the potential for discovery of cultural and historic artifacts, and the procedures to be followed if such artifacts are uncovered.

Given the strong possibility of encountering the remains of cultural or historic artifacts within the project site, prior to the commencement of foundation excavations the project sponsor would undertake a program of archaeological testing. This would consist of observation and monitoring by a qualified historical archaeologist of site clearance of at least any materials below existing grade level, and either the placement of a series of mechanical, exploratory borings or other similar on-site testing methods. The archaeologist would supervise the testing at the site to determine the probability of finding cultural and historical remains. At the completion of the archaeological testing program, the archaeologist would submit a written report to the ERO, with a copy to the project sponsor, which describes the findings, assesses their significance and proposes appropriate recommendations for any additional procedures necessary for the mitigation of adverse impacts to cultural resources determined to be significant.

An historical archaeologist would be present during site excavation and would record observations in a permanent log. The ERO would also require cooperation of the project sponsor in assisting such further investigations on site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

In addition, a program of on-site construction monitoring by a qualified historical archaeologist, designed to allow for the recovery of a representative sample of the cultural materials existing on the site, would be implemented by the project sponsor. This monitoring and recovery program would result in a written report to be submitted to the ERO, with a copy to the project sponsor.

Should cultural or historic artifacts be found following commencement of excavation activities, the archaeologist would assess the significance of the find, and immediately report to the ERO and the President of the LPAB. Upon receiving the advice of the consultants and the LPAB, the ERO would recommend specific mitigation measures, if necessary. Excavation or construction activities following the preconstruction archaeological testing program which might damage the

discovered cultural resources would be suspended for a maximum of four weeks (cumulatively for all instances that the ERO has required a delay in excavation or construction) to permit inspection, recommendation and retrieval, if appropriate.

Following site clearance, an appropriate security program would be implemented to prevent looting. Any discovered cultural artifacts assessed as significant by the archaeologist upon concurrence by the ERO and the President of the LPAB would be placed in a repository designated for such materials. Copies of the reports prepared according to these mitigation measures would be sent to the California Archaeological Site Survey Office at Sonoma State University.

# WIND

#### MEASURE PROPOSED AS PART OF THE PROJECT

The project would be designed to include wind walls, deflectors, baffles, trellises or other features or devices to reduce wind speeds on the proposed roof top open space to seven mph (the comfort criterion for public seating areas established in Section 148 of the Downtown Plan). The open space would be enclosed, if necessary, if the standard could not be met outdoors. The design of the selected wind mitigation features would be based upon wind tunnel tests to be conducted for several locations on the proposed roof top open space; the test locations would be subject to approval by the Department of City Planning. The final wind reduction measures would be subject to City approval.

#### **TRANSPORTATION**

#### MEASURES PROPOSED AS PART OF THE PROJECT

During the construction period, construction truck movement would be permitted only between 9 a.m. and 3:30 p.m. (that is, not between 7 a.m. to 9 a.m. and 3:30 p.m. to 6 p.m.), to minimize peak-hour traffic conflicts and to accommodate queueing of Muni buses prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City

Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and any other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or later become known.

- The project sponsor would contribute funds for maintaining and augmenting transportation services in an amount proportionate to the demand created by the project, as provided by the Board of Supervisors Ordinance Number 224-81. Should said Ordinance be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted by the Planning Commission or the City in-lieu thereof, which would apply to all projects similarly situated.
- Within a year of full occupancy of the project, the sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. This measure would provide needed information to aid in transportation planning within the City.
- The project sponsor shall: 1) participate with other project sponsors and/or the San Francisco Parking authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.
- As required by Section 163 of the City Planning Code, a member of the building management staff would be designated as a transportation broker to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures;

encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

- Secure, safe bicycle storage facilities would be provided relative to the demand generated by project commuters and short-term visitors.
- Building directories and signs for the service elevators would be placed in the loading area.
- The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic.
- Off-street parking spaces would be controlled to assure priority for vehicles driven by the physically handicapped, and vanpool and carpool vehicles.
- The project would include a turntable for vehicles using the freight loading spaces.
   The turntable would facilitate off-loading and would permit trucks to exit on to
   Sacramento St. in forward motion.

# MEASURE UNDER CONSIDERATION BY PROJECT SPONSOR

The parking driveways could include warning devices (lighted signs and noise-emitting devices) to alert pedestrians to vehicles exiting the structure. The sponsor will make a decision on this measure during final design stage based on design criteria and cost.

# MEASURE REJECTED BY THE PROJECT SPONSOR

The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building, wherever necessary, or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.

# MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- Pacific Gas and Electric Company could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities could be installed at the same time as the street is opened for construction of the project to minimize street disruption.
- The City could implement the transportation improvements described in the Downtown Plan. Cumulative transportation impacts within San Francisco would be reduced by the improvements, and, to the extent that San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, regional cumulative impacts caused by downtown growth would also be reduced.
- The City could act to implement the transportation mitigations described in Vol. 1, Section V.E., Mitigation, pp. V.E.4-28, in the Downtown Plan EIR. These measures are similar or identical to those in the Downtown Plan and include, in summary: measures to construct and maintain rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; measures to fund Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; provide exclusive transit lanes on City streets and on freeways; reduce incentives to drive by reducing automobile capacities of bridges and highways in certain circumstances and by discouraging long-term parking; measures to encourage carpools, vanpools, and bicycle use; and measures to improve pedestrian circulation within downtown San Francisco. Some of the Implementing Actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project or such as the Transit Impact Development Fee assessment required by San Francisco ordinance 224-81 which contribute indirectly to implementation of these system-wide measures, it is not appropriate to impose mitigation at system-wide levels on individual projects.

# AIR QUALITY

#### MEASURES PROPOSED AS PART OF THE PROJECT

\*- The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other materials; cover trucks hauling debris, soils, sand or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants by such means as a prohibition on idling motors when equipment is not in use or trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of the construction period.

# **NOISE**

#### MEASURES PROPOSED AS PART OF THE PROJECT

- \*- The project sponsor would require the project contractor to muffle and shield intakes and exhaust, shroud or shield impact tools, and use electric-powered, rather than diesel-powered, construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).
- \*- The project sponsor would require the general contractor to construct barriers around the site and stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.
- \*- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise reduction measurements would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed building. For example, such design features would include fixed windows and climate control.

The sponsor will hire an acoustical expert to visit the Nam Kue school (on one occasion) to monitor the interior noise levels of the school to determine which equipment would result in an interior noise level in excess of 55 dBA with windows shut; use of such equipment would be prohibited between 4 p.m. to 6 p.m. weekdays (when classes are in session).

# GEOLOGY/TOPOGRAPHY

#### MEASURES PROPOSED AS PART OF THE PROJECT

- \*- A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design, excavation and construction of the project.
- \*- If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines.
- \*- Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Cost for the survey and any necessary repairs to service under the street would be borne by the project sponsor.

# WATER QUALITY

\*- See the second measure under Geology/Topography, above, for mitigation proposed to prevent sedimentation from entering storm sewers.

# **ENERGY**

#### PROPOSED AS PART OF THE PROJECT

\*- The project would meet the energy requirements of the State Administrative Code
Title 24, Part 6, Article 2. Energy Conservation Standards for New Non-Residential
Buildings.

#### MEASURES UNDER CONSIDERATION BY PROJECT SPONSOR

Depending on the final design and energy requirements of the project, the sponsor is considering the following additional conservation measures:

- \*- Use of natural gas for space and hot water heating.
- \*- Multiple light-switching; a variable air volume air conditioning system; and an outside-air/return-air economizer cycle.
- \*- A carbon monoxide monitoring system to control garage ventilation and avoid unnecessary operation of fans.
- \*- A water economizer cycle system using condenser water to generate chilled water could be installed so that in hot weather the heat exchangers would cool the water without using excessive amounts of electricity.
- \*- The project could incorporate low-flow plumbing to conserve electricity.
- \*- Fluorescent lights with parabolic diffusers could be used to conserve energy and reduce glare. Return-air diffuser slots in light fixtures could reduce air conditioning loads by removing part of the heat generated by light fixtures. Whenever possible, office suites could be equipped with individualized light switches, and time clock operation to conserve electrical energy.

\*- The sponsor could perform a thorough energy audit of the structure's actual energy use after the first year of occupancy, implement all cost-effective alterations to the structure's energy system identified in the audit, and make results of the audit available to the City.

# **HAZARDS**

#### MEASURES PROPOSED AS PART OF THE PROJECT

- \*- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance of final building permits by the Department of Public Works.
- \*- To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

#### UTILITIES / PUBLIC SERVICES

#### MEASURE PROPOSED AS PART OF THE PROJECT

The project would include on-site storage for trash containers in the basement.
 Containers would not be placed on streets or sidewalks except during actual trash pickup.

# MEASURE UNDER CONSIDERATION BY PROJECT SPONSOR

The project could provide containers to collect and store recyclable solid waste (such as glass, metal, computer cards, and newspaper) and the project sponsor could contract for recycling service. The project sponsor will make a decision about this measure during final building design based on cost effectiveness.

#### VI. SIGNIFICANT ENVIRONMENTAL EFFECTS

This chapter is subject to final determination by the City Planning Commission as part of its certification process for the EIR. Chapter VI of the Final EIR will be revised, if necessary, to reflect the findings of the Commission.

This chapter identifies significant impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the project, as described in Chapter V., Mitigation Measures, pp. 140 to 149.

No project-specific significant impacts have been identified. Mitigation measures included as part of the project are described in Chapter V., Mitigation Measures, pp. 140 to 149.

Cumulative development in downtown San Francisco would have a significant effect on the environment in that it would generate cumulative traffic increases as well as cumulative passenger loadings on Muni, BART and other regional transit carriers. These cumulative transportation impacts could cause violations of the total suspended particulate (TSP) standard in San Francisco with concomitant health effects and reduced visibility. The proposed project would contribute to these cumulative effects.

#### VII. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the alternatives were rejected in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site. See Table 12, p. 164 for a summary comparison of the project with Alternatives B, C, D and E.

# A. ALTERNATIVE A: NO PROJECT

#### DESCRIPTION OF ALTERNATIVE

This alternative would entail no change to the site. The proposed project would not be built there. The existing nine-story office building and three-story parking garage that are proposed to be demolished would be retained.

#### DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

The environmental characteristics of this alternative would be generally as described in the Environmental Setting sections of this report (see Chapter III, Setting, pp. 35 to 57, for a discussion of existing conditions). Transportation and noise impacts associated with the demolition of the on-site building and parking garage and subsequent project construction, would not occur. Transportation and air quality conditions (described in Chapter IV, Impacts, pp. 59 to 139) as base conditions with cumulative development, but without the project, would exist in the site vicinity. There would be no change in the demand from the site for energy or community services. There would be no potential effects on cultural resources. Employment on the site would not increase (as it would with the project, from about 373 existing to about 1,220 jobs). Revenues from, and costs of, the project would not result. Land uses, site views, shadows and winds would not change. The increase in parking demand and the replacement of existing parking supply that would result with the project would not occur.

This alternative could result in the development of other office space, possibly a high-rise building comparable to the project, at another location. Alternative development within the San Francisco downtown area would result in many of the same impacts as described for the project. The effects of development would depend largely on the location chosen and cannot be accurately determined. This alternative would preserve the option to develop a similar or different type of building on the site in the future.

#### SPONSOR'S REASONS FOR REJECTION

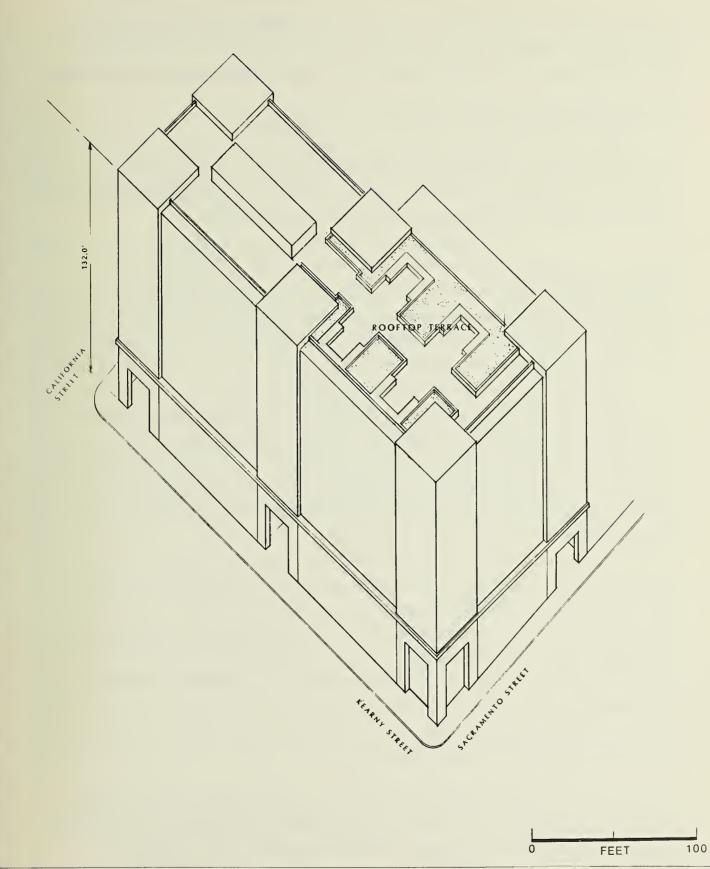
This alternative was rejected by the project sponsor because it would not meet the objectives of the Federal Home Loan Bank and would not use the development potential of the site allowable under the Downtown Plan. Additionally, this alternative would not use Transferred Development Rights (TDR), which promote preservation and restoration of historic buildings in the C-3 District.

# B. ALTERNATIVE B: NO TRANSFER OF DEVELOPMENT RIGHTS, 9:1 FAR

#### **DESCRIPTION OF ALTERNATIVE**

The project as proposed (with an FAR of about 11:1) would include the transfer of about 65,700 gsf of development rights from as-yet unidentified sites. This alternative considers a building without TDR. The FAR would be 9:1, the basic allowable FAR (see Figure 29, p. 153).

Office space would be 223,500 gsf compared to 312,700 gsf for the project. The building would be ten stories (about 132 ft. tall with a 22 ft. mechanical penthouse) over the entire site compared to a stepped design with 18 stories (about 244 ft. tall) at Sacramento and California Sts., nine stories (about 138 ft. tail) at Kearny and Sacramento Sts. and three stories (45 ft. tall) at the northwest corner for the project. Two loading docks would be provided for this alternative compared to three for the project. Retail area, parking space, and lobby would be the same as with the proposed project (7,900 gsf retail, 90,600 gsf parking). Mechanical space would be 20,100 gsf compared to 21,100 for the project. Open space would be 8,800 sq. ft. compared to 10,400 for the project. Under the Planning Code, the ground floor, retail, circulation and building service areas, would not be applicable to the FAR.



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Kohn Pedersen Fox Associates

FIGURE 29
ALTERNATIVE B: NO TRANSFER OF
DEVELOPMENT RIGHTS, 9:1 FAR

As with the project, parking area up to seven percent of the gross floor area of the building may be considered accessory parking; parking area in excess of seven percent or about 39,300 gross sq. ft. (excluding ramps) may not, and would be applicable to the FAR.

#### DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

This alternative would be about 112 ft. shorter than the project at Sacramento and California Sts. and about six ft. shorter than the project at Kearny and Sacramento Sts.; it would be less visible in mid- and long-range views than the project.

Shadows from this alternative would be about 46% shorter than the project from the California and Kearny Sts. portion of the building, and four percent shorter than the project from the Kearny Sacramento St. portion of the building. Wind effects from this alternative would be greater at 13 of the locations tested, the same at seven locations and less at two locations than the project.

The open space requirement would be met as discussed above. This alternative would comply with the Planning Code requirement for art, as would the project. This alternative would provide employment for about 882 employees, compared to about 1,220 employees for the proposed project. It would generate a demand for about 49 new dwelling units in San Francisco, based on the OAHPP formula, compared to 83 for the proposed project.

Transportation, air quality and energy impacts associated with on-site uses would be about 20% less than those of the proposed project because there would be about 20% less office space than with the project. Construction noise impacts would be experienced for a shorter amount of time, as the construction period would be shorter. Any effect on cultural resources would be the same as for the project, as the depth of excavation would be the same.

#### SPONSOR'S REASONS FOR REJECTION

The sponsor has rejected this alternative because it would not fully use the development potential permitted for the site under the Downtown Plan and would not use TDR, which promotes restoration and preservation of historic structures in the C-3 District.

# C. ALTERNATIVE C: NO PARKING

#### DESCRIPTION OF ALTERNATIVE

This alternative would have no parking spaces (the project would have 232); other uses, building dimensions, design elements and floor areas would be as for the project. The basement would contain only service/mechanical space, on one level instead of the three basement levels of the project.

#### DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

All impacts of this alternative would be as for the project (land use, urban design, shadow, wind, construction noise, employment and growth inducement), other than traffic and air quality impacts on local intersections which would be less. Traffic impacts on local intersections as a result of the project would not change levels of service at nearby intersections or freeway on-ramps, or measurably affect air quality. This alternative would eliminate on-site parking, compared to the project which would decrease parking from 269 to 232 spaces, and thereby would reduce traffic from the site at local intersections. Unmet parking demand from the alternative would be 232 equivalent spaces greater than that for the project. This alternative would have less potential for disturbance of cultural resources, as one basement level would be needed for this alternative building, rather than three. This alternative would provide employment for about 1,216 new employees compared to 1,220 for the proposed project. All other impacts of this alternative would be as for the project.

#### SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because it would eliminate existing parking; it would not provide the amenity of on-site parking; it would not meet the demand for increased parking generated by the project (identified in the Transportation section of this EIR); and it would not meet the objectives of the Federal Home Loan Bank.

# D. <u>ALTERNATIVE D: NO EXCEPTION TO PLANNING CODE, SEPARATION OF</u> TOWERS OR BULK REQUIREMENTS

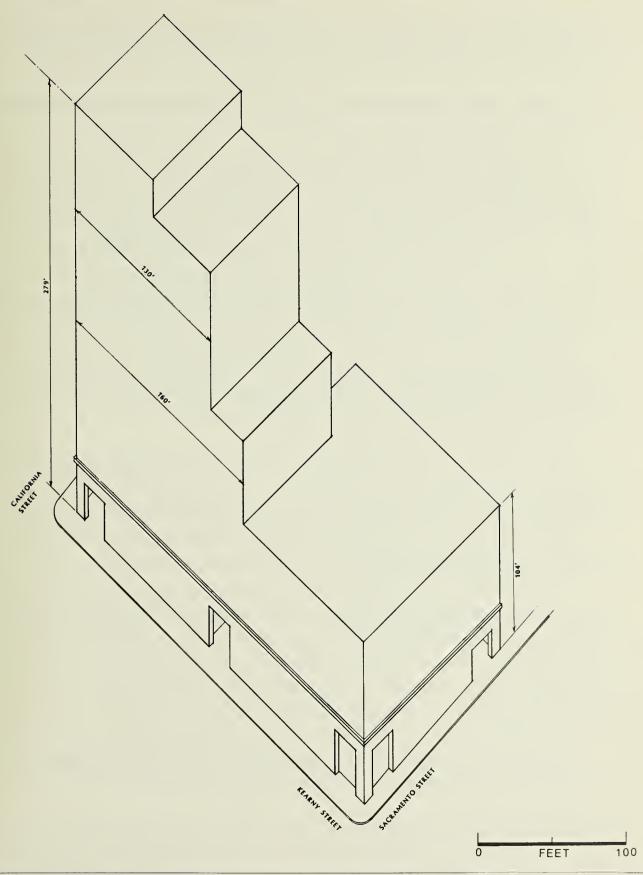
#### DESCRIPTION OF ALTERNATIVE

This alternative would include setbacks above the base as called for in Section 132.1(c) Separation of Towers (see Figure 30, p. 157). This alternative would be set back above the base 15 ft. from the western interior property line. This alternative would include 317,500 sq. ft. of office, 10,700 sq. ft. of open space, 131,700 sq. ft. of parking, mechanical and other space, and the same area (7,900 sq. ft.) of retail as the project (compared to 312,700 sq. ft., 131,700 sq. ft., and 10,700 sq. ft., respectively, with the project). Also, this alternative would have a maximum length of 160 ft. in the lower tower (compared to 155 ft. for the project), and a maximum length of 130 ft. in the upper tower (compared to 155 ft. for the project); it would have a diagonal dimension of 190 ft. in the lower tower and 160 ft. in the upper tower (compared to 170 ft. for both lower and upper tower for the project); it would have a maximum average floor area of 17,000 sq. ft. in the lower tower and 12,000 sq. ft. in the upper tower (compared to 13,190 sq. ft. and 12,740 respectively for the project), and would have a maximum floor size of 20,000 sq. ft. in the lower tower and 17,000 sq. ft. in the upper tower (compared to 13,190 sq. ft. for both the lower tower and upper tower for the project). This alternative would thus not require an exception to City Planning Code bulk limits. This alternative would have an FAR of about 12:1 (compared to 11:1 for the project) and a maximum height of 279 ft. at the southern portion of the building and 104 ft. at the northern portion of the building (compared to 244 ft. and 138 ft. respectively for the project). Other features of this alternative would be as for the project.

#### DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

This alternative would be taller at California and Kearny Sts. and shorter at Kearny and Sacramento Sts. than the project. It would therefore have greater visibility in mid- and long-range views and less visibility from close-in views from north of the site. The area of retail and parking would be the same as those of the project. Office space would be about two percent greater than with the project. This alternative would require about 83,500 sq. ft. of transferred development rights compared to 65,700 sq. ft. for the project.

Shadow effects would be about 12% greater than those of the project during some times of the year due to the greater height on the southern portion of the building. Wind effects



00 California Street ederal Home Loan Bank of San Francisco

OURCE: Kohn Pedersen Fox Associates

FIGURE 30
ALTERNATIVE D: NO EXCEPTION TO
PLANNING CODE SEPARATION OF
TOWERS OR BULK REQUIREMENTS

of this alternative would be greater at 14 of the locations tested, the same at three locations and less at four locations than the project.

As would the project, this alternative would comply with City Planning Code requirements for childcare, art and open space.

Off-street loading space standards in the Code would require three spaces for this alternative, which would be provided in the same manner as those of the proposed project. This alternative would include the same number of parking spaces, as the project. This alternative would include the same number of parking spaces, as the project. The fee structure for all the parking in this alternative would favor short-term parking (the project proposes 48 replacement short-term spaces, 82 long-term and 102 yet to be determined as long- and/or short-term).

This alternative would provide employment for about 1,235 employees, compared to 1,220 employees for the proposed project. It would generate a demand for about 85 new dwelling units in San Francisco, based on OAHPP, compared to 83 for the project.

Transportation, energy, air quality, and noise associated with on-site uses would be about the same as those with the project (one percent greater). Cultural resource effects associated with construction of this alternative would be as for the proposed project.

# SPONSOR'S REASONS FOR REJECTION

The sponsor has rejected this alternative because the proposed setback from the western interior property line is allowable under Section 272 of the Planning Code and it would not meet the objectives of the Federal Home Loan Bank. Also, this alternative would have greater shadow impacts than the proposed project due to a greater height on the northern portion of the building.

# E. <u>ALTERNATIVE E: BUILDING HEIGHT OF 50 FT. AT SACRAMENTO WITH A 60-FT.</u> DEEP SETBACK ABOVE

#### DESCRIPTION OF ALTERNATIVE

This alternative would be 50 ft. tall at Sacramento and Kearny Sts., with a 60 ft. setback or first step up to about 164 ft. tall, along the Kearny St. frontage, then a second step up

to about 244 ft. tall, about 110 ft. south of Sacramento St. (see Figure 31, p. 160). The 244 ft-tall portion would be separated into three vertical components of similar height. The entire Sacramento St. frontage of this alternative would be at a height of 50 ft., thus relating to the existing street wall height along Sacramento St. west of the site. By comparison, the project would be 138 ft. tall stepping up to 244 ft. tall, 118 ft. south of Sacramento St. along the Kearny St. frontage, and would step down from 138 ft. to 45 ft. about 85 ft. from Kearny St. along the Sacramento St. frontage. This alternative would include about 319,800 sq. ft. office and 10,700 sq. ft. of open space (compared to 312,700 sq. ft., and 10,400 sq. ft., respectively, for the project). Other features of this alternative would be the same as for the project.

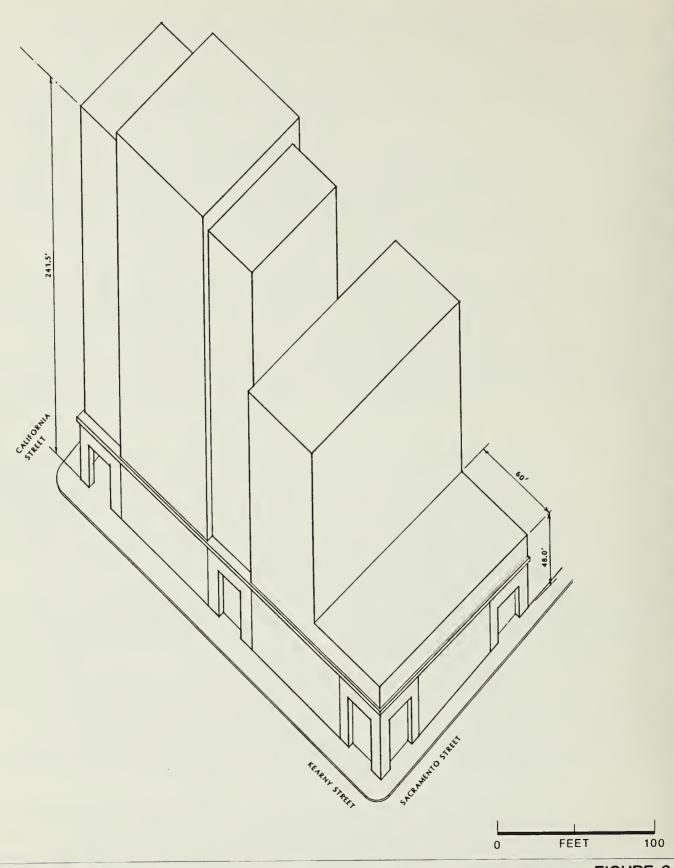
The FAR of this alternative would be about 12:1 compared to 11:1 for the project. This alternative would require about 72,360 sq. ft. of TDR, compared to 65,700 sq. ft. for the project. This alternative would have the same maximum lengths in the upper and lower towers and would require an exception from the City Planning Code, separation of towers and bulk limits as would the project. Other features of this alternative would be as for the project.

# DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

This alternative would be about 88 ft. shorter than the project at Sacramento and Kearny Sts. (for a depth of 60 ft.) 26 ft. taller than the proposed project at the northwest corner, and about the same height as the project for the southern portion of the building. This alternative would include three steps in the building, as opposed to two with the project (see Figure 31). It would be less prominent than the project in mid- and long-range views from the north and northwest, and would be of similar prominence in views from other viewpoints.

Shadow effects would be similar to the proposed project at most times of the year due to the similar height of this alternative (242 ft.) on the southern portion of the building. Wind effects of this alternative would be greater at eight of the locations tested, the same at six locations and less at eight locations than the project.

The open space requirement would be met as with the project. This alternative would meet the Planning Code requirement for art, as would the proposed project. This alternative would provide employment for about 1,240 employees, compared to about



600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Kohn Pedersen Fox Associates

FIGURE 31
ALTERNATIVE E: BUILDING HEIGHT
OF 50 FT. AT SACRAMENTO ST.
WITH A 60-FT. DEEP SETBACK ABOVE

1,220 employees for the proposed project. It would generate a demand for about 86 new dwelling units in San Francisco, based on the OAHPP formula, compared to 83 for the project.

Transportation, air quality, energy, and noise effects associated with on-site uses would be about the same as for the project. Cultural resource effects associated with the construction of this alternative would be as for the project.

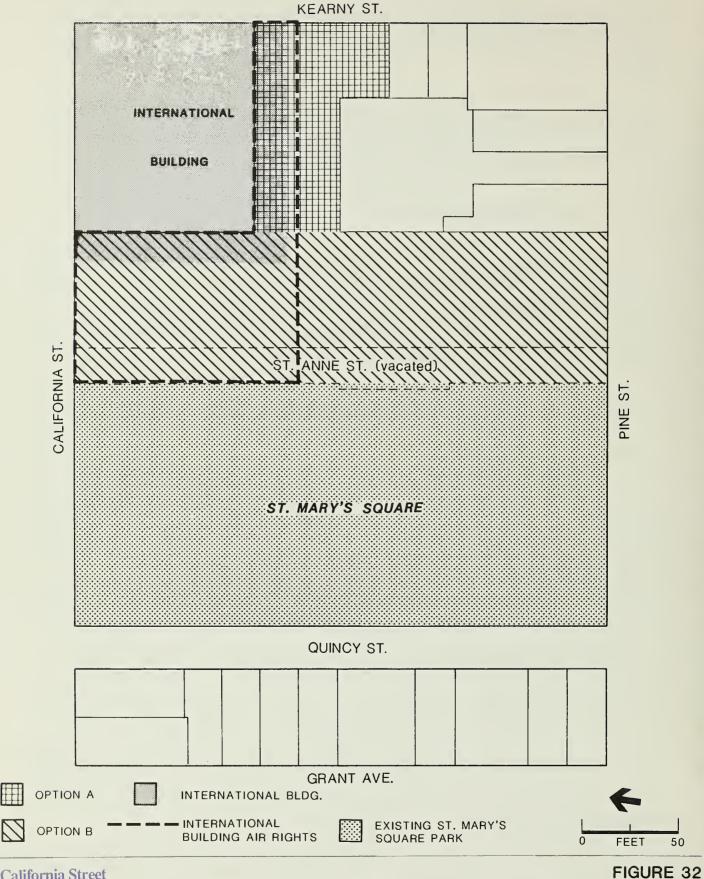
#### SPONSOR'S REASONS FOR REJECTION

This alternative has been rejected by the project sponsor because, in the sponsor's opinion, it would be architecturally inferior to the project and would result in a bulky and intrusive massing when viewed from the north. Furthermore, in the sponsor's opinion, this alternative would not meet the space planning objectives of the Federal Home Loan Bank because it would result in an awkward and inefficient layout.

# F. PROVISION OF REQUIRED OPEN SPACE OFF-SITE AT ST. MARY'S SQUARE

#### DESCRIPTION OF ALTERNATIVE

This alternative considers expansion of the St. Mary's Square Park in lieu of provision of open space on site. The project, as proposed, would provide open space on the roof of the 18 story tower and in an open galleria along California St. The St. Mary's Square Garage, as indicated in Figure 32, p. 162, is jointly owned by the San Francisco Department of Real Estate and the Parking Authority. This alternative considers either of two options: (A) payment by the project sponsor for the cost of construction of a platform over the L-shaped portion of the garage off of Kearny Street (see Figure 32), payment for an elevator running from Kearny St. to the top of the platform, and payment for the installation and maintenance of landscaping on the platform to allow access from Kearny St. to the park; or (B) in conjunction with the Department of Parks and Recreation, payment for the extension of the St. Mary's Square Park over the area indicated in Figure 32. With this alternative, the proposed roof-top open space atop 600 California St. would not be built; however, the 3,100 sq. ft. galleria along California St. would still be credited toward the open space requirement of 8,020 gsf.



600 California Street Federal Home Loan Bank of San Francisco FIGURE 32
PROVISION OF REQUIRED OPEN SPACE
OFF-SITE AT ST. MARY'S SQUARE

SOURCE: ESA

This alternative would require approvals from the San Francisco Department of Real Estate, Parking Authority, Department of Recreation and Parks, and the City Planning Department.

#### DISTINCTIVE ENVIRONMENTAL EFFECTS OF ALTERNATIVE

Under this alternative, the mechanical penthouse in the southern tower would be 16 ft.-tall compared to 22 ft.-tall for the project (as no stairway access or restrooms would be required to the roof with this alternative as with the project). All other features of this alternative (except the open space provision) would be the same as for the project.

Option A would result in the development of about 5,700 sq. ft. of new off-site park area over the St. Mary's Square Garage, in addition to the 3,100 sq. ft. on-site galleria along California St. Total new open space would be 8,800 sq. ft. for Option A compared to 10,400 sq. ft. for the project. Option B would result in payment for the extension of up to 27,250 sq. ft. of new off-site park area adjacent to St. Mary's Square; the 3,100 sq. ft. on-site galleria would still be built but would not count against the open space requirement. Total new open space would be 30,350 sq. ft. for Option B, compared to 10,400 sq. ft. for the project; this figure does include the galleria.

Traffic, air quality, energy, wind noise and employment effects of this alternative would be about the same as for the project. Shadow effects would be slightly less than those of the project, as the elimination of the elevator to the rooftop open space would reduce the height of the mechanical penthouse six feet. Impacts on cultural resources would be the same as for the project.

Option A would provide pedestrian access from Kearny where there is now none via elevator to the new open space area, as would the project. Option B would provide pedestrian access from California and Pine Sts. with the project to the proposed on-site rooftop open space, would have one elevator access in the south tower adjacent to the Hartford Building, and the galleria would be accessible at street level. Both options (A) and (B) would require an allowable exception to Code Section 138(c) under Section 309, for that part of the open space provided off-site.

TABLE 12: SUMMARY COMPARISON OF PROJECT WITH ALTERNATIVES B, C, D AND E

	Project	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
FAR Height to top of Penthouse (ft.)	11:1 266	9:1 154	10:1 266	12:1 301	12:1 266	11:1 260
<u>Use Areas</u>						
Office (sq. ft.) Retail (sq. ft.) Parking, Loading, Mechanical,	312,700 7,900	223,500 7,900	312,700 7,900	317,500 7,900	319,800 7,900	312,700 7,900
Storage etc. (sq. ft.) Total Gross sq. ft. Maximum Number of Floo	131,700 452,300 ors 18	130,700 362,100 10	41,100 361,700 18	131,700 457,100 21	131,700 459,400 18	131,700 452,300 18
Required Open Space (sf*		6,236	7,234	8,116	8,162	8,020
Open Space Provided On-Site: Off-Site:	10,400	8,800 0	10,400	10,700	10,700	None (A)8,800 sq. ft. (B)30,350
sq. ft.						(D)30,330
Relationship to Downtown	ı Bulk Requi	irements				
Needs Bulk Exception Needs Separation of	Yes	Yes	Yes	No	Yes	Yes
Towers Exception	Yes	No	Yes	No	Yes	Yes
Other Features						
Child Care Art Need TDRs (sq. ft.) Shadows on St. Mary's Squ Portsmouth Square Chinese Playground Housing Units	Yes Yes Yes 65,700 Jare No No No	Yes Yes No 0 No No No	Yes Yes Yes 26,300 No No	Yes Yes Yes 70,200 No Yes Yes	Yes Yes Yes 72,360 No No	Yes Yes Yes 65,700 No No
Requires (OAHPP) Potential Jobs	83 1,220	49 882	83 1,216	85 1,239	86 1,240	83 1,220

SOURCE: Environmental Science Associates, Inc. and Kohn Pedersen Fox Associates

# SPONSOR'S REASONS FOR CONSIDERATION

The sponsor has not rejected this alternative and is pursuing discussion with the Department of Real Estate, Parking Authority, Department of Recreation and Park, and the City Planning Department.

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226/11 Chinese Chamber of Commerce of S.F. c/o S. L. Lam 730 Sacramento Street San Francisco, CA 94108

226/10 KHC Investment Co. 445 Grant Ave., #700 San Francisco, CA 94108

226/9 Ching Wong Min & Wong Man Foon Wong Lok 710 Sacramento Street, #4 San Francisco, CA 94108

226/8 ASCO Investment Co. of Sacramento c/o John Fung 625 Kearny Street San Francisco, CA 94108

22/20 Wong Chung Kwong & Mai Lai 441 Dewey Blvd. San Francisco, CA 94116

#### **MEDIA**

Associated Press 1390 Market Street, Suite 318 San Francisco, CA 94102 Attn: Bill Shiffman

Leland S. Meyerzove KPOO - FM P.O. Box 6149 San Francisco, CA 94101

San Francisco Bay Guardian 2700 - Nineteenth Street San Francisco, CA 94110 Attn: Patrick Douglas, City Editor San Francisco Business Journal 635 Sacramento Street, Suite 310 San Francisco, CA 94111 Attn: Kirstin E. Downey

San Francisco Chronicle 925 Mission Street San Francisco, CA 94103 Attn: Evelyn Hsu

San Francisco Examiner P.O. Box 7260 San Francisco, CA 94120 Attn: Gerald Adams

San Francisco Progress 851 Howard Street San Francisco, CA 94103 Attn: E. Cahill Maloney

The Sun Reporter 1366 Turk Street San Francisco, CA 94115

Tenderloin Times 146 Leavenworth Street San Francisco, CA 94102 Attn: Rob Waters

#### LIBRARIES

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Attn: Faith Van Liere

Environmental Protection Agency Library 215 Fremont Street San Francisco, Ca 94105 Attn: Jean Circiello

Stanford University Libraries
Jonsson Library of Government Documents
State and Local Documents Division
Stanford, CA 94305

Government Publications Department San Francisco State University 1630 Holloway Avenue San Francisco, CA 94132

Hastings College of the Law - Library 200 McAllister Street San Francisco, CA 94102-4978

Institute of Government Studies 1209 Moses Hall University of California Berkeley, CA 94720

#### PROJECT SPONSOR

Federal Home Loan Bank of San Francisco 600 California St. San Francisco, CA 94120 Attn: Raymond Terwilliger, Jr.

#### PROJECT ARCHITECT

Kohn Pedesen Fox Associates PC 111 West 57th Street New York, NY 10019 Attn: Lee Polisano

#### PROJECT ATTORNEY

Brobeck Phleger & Harrison Spear St. Tower One Market Plaza San Francisco, CA 94105 Attn: Susan Diamond

## X. APPENDICES

	<u>Page</u>
Appendix A: Initial Study	A-2
Appendix B: Wind Study Methodology	A-42
Appendix C: Transportation	A-48
Appendix D: Air Quality	A-58
Appendix E: Typical Noise Levels	A-60



# DEPARTMENT OF CITY PLANNING 450 MCALLISTER STREET - SAN FRANCISCO CALIFORNIA 94102

## NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

ate	of	this	Notice:	July	11,	1986
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Lead Agency: City and County of San Francisco, Department of City Planning 450 McAllister Street, San Francisco, CA 94102

Telephone: (415) 558-5261 Agency Contact Person: Carol Roos

Project Title: 86.85E:

600 California Street, Federal Home Loan Bank

of San Francisco

Project Sponsor: Federal Home Loan Bank of

San Francisco

Project Contact Person: Raymond Terwilliger, Jr

Project Address: 600 California St., the west side of Kearny St. from Sacramento to California Sts. Assessor's Block(s) and Lot(s): Lots 3 and 26, in Assessor's Block 241

City and County: San Francisco

Project Description: Demolition of a nine-story office building and a three-story parking garage. Construction of an office and retail building stepped from about 138 feet-tall, nine stories (at Sacramento St.) to about 244 feet-tall, 18 stories (at California St.), plus subsurface parking. The project would contain about 328,000 gross square feet (gsf.) of office, 15,600 gsf. of retail, 7,500 gsf. of open space, 230 parking spaces, up to five service and loading spaces.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Please see attached Initial Study

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: July 21, 1986

An appeal requires: 1) a letter specifying the grounds for the appeal, and:

2) a \$35.00 filing fee.

## Initial Study 600 California Street Federal Home Loan Bank of San Francisco 86.85E

#### I. PROJECT DESCRIPTION

The proposed project would be the demolition of a nine-story office building and a three-story parking garage and construction of an office and retail building, plus subsurface parking. The site is bounded by California, Kearny and Sacramento Streets and by development on the west (see Figure 1, p. 2); the main building entrance and address would be on California Street. The new building would include three levels of subsurface parking with mechanical space; ground floor retail, open space and service space; 17 floors of office space and a mechanical penthouse. The project would contain about 328,000 gsf of office, 15,600 gsf of retail, and 7,500 gsf of public open space, and about 230 parking spaces on two to three subsurface levels. The proposed building would step down from about 244 ft., 18 stories, at the corner of California and Kearny Streets to about 138 ft., nine stories, at the corner of Kearny and Sacramento Streets (see Figure 2, p. 3). The mechanical level would extend another 15 ft., for a total height of 259 ft. at California and Kearny; there would be no mechanical level extending above the lower portion of the building along Kearny and Sacramento Streets. Up to three service vehicle and two van service loading spaces would be provided. Service loading and parking access would be from Sacramento Street. The Floor Area Ratio (FAR) on the project site would be 12:1. The project proposes the use of about 87,300 gsf of Transferable Development Rights (TDRs) from as-yet unidentified lots.

The project sponsor is the Federal Home Loan Bank of San Francisco. The project architect is Kohn Pederson Fox Associates. Project plans are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.

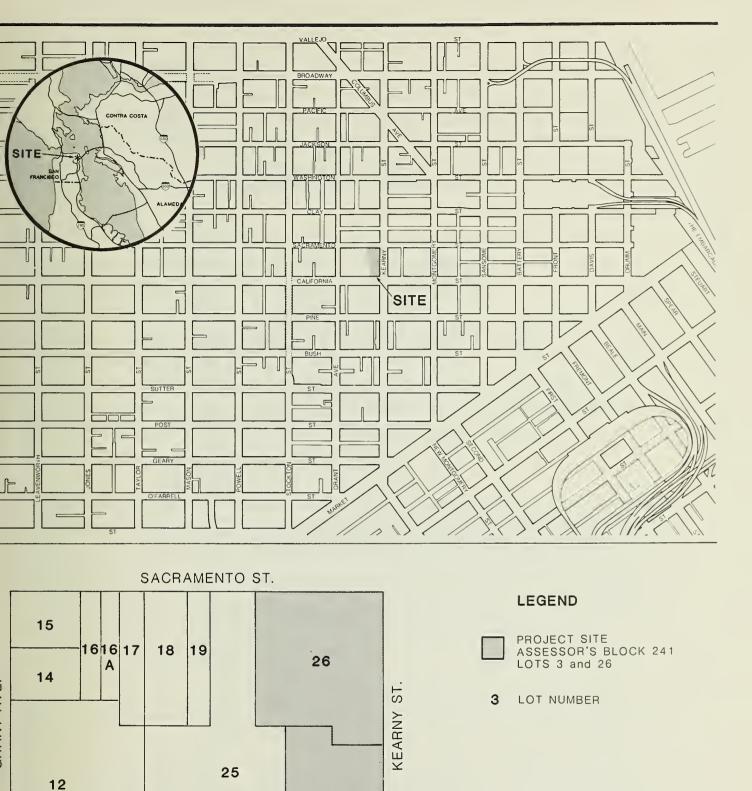
The 31,822-sq.-ft. site includes Lots 3 and 26 of Assessor's Block 241, in the financial district (see Figure 1, p. 2). The site is in the C-3-O (Downtown Office) Use District, and the 250-S Height and Bulk District. The basic allowable FAR is 9:1. The maximum allowable FAR with the use of Transferable Development Rights is 18:1.

The 34-story Hartford building abuts the site on the west, and fronts on California Street with a two story garage and service entrance that fronts on Sacramento Street. The 22-story International Building is across California Street, south of the site. The 33-story 580 California Street Building and the 10-story, 530 Kearny Street Building are across Kearny Street, east of the site. Four three-story buildings are across Sacramento Street, north of the site, including the Chinese Chamber of Commerce Building.

The site is occupied by two structures. The existing nine-story 600 California Street building (Lot 3) is owned and occupied entirely by offices of the Federal Home Loan Bank. A three-story parking garage at 551 Kearny Street, also owned by the Bank, occupies the northern portion of the site (Lot 26). Both buildings would be demolished for the project. The existing 600 California Street building contains about 93,086 gsf of office space and 8,386 gsf of basement area, with 29 parking spaces. The garage at 551 Kearny contains 201 parking spaces and a small service office occupied by Hertz Rent-A-Car Corporation. The project would add to the site about 234,914 new gsf of office; 15,600 new gsf of retail; 7,500 gsf of open space; replace 230 parking spaces; and add up to three service loading spaces, and two van service spaces.

## II. INTRODUCTION

A tiered EIR will be prepared for the proposed 600 California Street, Federal Home Loan Bank of San Francisco project pursuant to Sections 21093 and 21094 of the Public Resources Code, California Environmental Quality Act (CEQA). The EIR will be tiered from the Downtown Plan EIR (EE81.3, Final EIR, certified October 18, 1984) and will analyze project-specific impacts. The EIR will discuss potentially significant effects that were not examined in the Downtown Plan EIR and will include applicable mitigation measures for site specific effects. Cumulative impacts of the development forecast in the C-3 districts to the year 2000 are addressed in the Downtown Plan EIR. That cumulative analysis will not be repeated in the EIR for this project. The Downtown Plan EIR may be examined at the Department of City Planning, 450 McAllister Street, Sixth Floor; the San Francisco Main Library; and various branch libraries.



0 California Street ederal Home Loan Bank of San Francisco

CALIFORNIA ST.

ASSESSOR'S BLOCK 241

11

FIGURE 1 SITE AND VICINITY

FEET

DURCE: ESA

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CALIFORNIA

STREET

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GLASS -

METAL

Federal Home Loan Bank of San Francisco 600 California Street

A-6

STONE

SOURCE: Kohn Pedersen Fox Associates

## Tiered Environmental Impact Report

Where a prior environmental impact report has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets the specified requirements is required (as of January 1, 1986) to examine significant effects of the later project upon the environment, with exceptions, by using a tiered report.

Agencies are required to tier EIRs which they prepare for separate but related projects including general plans, zoning changes and development projects, in order to avoid repetitive discussions of the same issues in successive EIRs and ensure that EIRs prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate on environmental effects which may be mitigated or avoided in connection with the decision on each later project. Tiering is appropriate when it helps a public agency to focus on the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous environmental impact reports. Environmental impact reports shall be tiered wherever feasible, as determined by the lead agency.

The law directs that where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on the later project need not examine those effects which were either mitigated or avoided as a result of the prior EIR, or examined at a sufficient level of detail in the prior EIR to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

The Initial Study is to assist the lead agency in making the determinations required for tiering.

#### III. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

#### A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

The proposed project is examined in this Initial Study to identify potential effects on the environment. The cumulative impacts of growth in the C-3 districts to the year 2000

were adequately analyzed in the Downtown Plan EIR. It is important to understand the long-term nature of the cumulative analysis of growth over time. The cumulative analysis in the Downtown Plan EIR addresses growth through the year 2000. That analysis of cumulative impacts remains current and valid and there are no new significant effects. Some project-specific potential effects have been determined to be potentially significant, and will be analyzed in an environmental impact report (EIR). They include: the relationship of the project to the Master Plan including the Downtown Plan and the Planning Code; visual quality; project-related transportation; traffic-generated air quality effects; shadow; wind; project-related employment; and cultural resources (archaeology).

#### B. EFFECTS FOUND TO BE INSIGNIFICANT

The following potential impacts were determined either to be insignificant or to be mitigated through measures included in the project. These items require no further environmental analysis in the EIR:

<u>Land Use</u>: The proposed office and retail uses are principal permitted uses in the C-3-0 District; the project would be compatible with existing and proposed development in the vicinity; it would continue and intensify office uses now existing on the site, and add retail uses.

Glare: Mirrored glass would not be used (see the mitigation measure on p. 31).

<u>Housing</u>: The project would comply with the Office Affordable Housing Production Program Ordinance (see the mitigation measures on page 11). Cumulative and indirect effects including those of the project are addressed in the EIR prepared for the Downtown Plan.

Construction and Operational Noise: The project construction phase would have short-term impacts on the noise environment in the site vicinity. Pile driving would not be required for project construction. Mitigation measures to reduce construction noise are included as part of the project (see p. 31). After completion, building operation and project-related traffic would not perceptibly increase noise levels in the site vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance and the

project would conform to the Noise Guidelines of the Environmental Protection Element of the Master Plan.

Construction Air Quality: Project construction would have short-term impacts on air quality in the site vicinity. Mitigation measures to reduce particulate and hydrocarbon emissions generated during construction activities are included as part of the project (see pp. 31-32).

<u>Utilities/Public Services</u>: The project would increase the demand for utilities and public services but would not require additional personnel or equipment.

<u>Biology</u>: The project site is completely developed; therefore, the project would not affect vegetation or wildlife.

Geology/Topography: A preliminary geotechnical investigation has been made for the project, and a final detailed geotechnical report would be prepared prior to commencement of construction, by a California-licensed geologic engineer. The project sponsor and contractor would follow the recommendations of the final report regarding any excavation and construction for the project. Measures to mitigate potential impacts associated with excavation and dewatering are included as part of the project (see p. 32).

<u>Water</u>: The site is completely covered by impervious surfaces; therefore, the project would not affect drainage patterns or water quality. See also the measures referenced above to mitigate potential impacts of dewatering and excavation.

Energy/Natural Resources: The project would be designed to comply with performance standards of Title 24 of the California Administrative Code, regarding energy conservation. Its annual energy budget would be about 77,600 Btu per sq. ft., or about 54% of the allowable budget of 144,000 Btu per sq. ft. Peak electrical energy and natural gas use would coincide with PG&E's systemwide peaks. Cumulative and indirect effects including those of the project are addressed in the EIR prepared for the Downtown Plan. Energy mitigations measures would be included as part of the project (see pp. 33-34).

<u>Hazards</u>: The project would not create a health hazard or be affected by hazardous uses. <u>Mitigation measures</u> to assure project compliance with the City's Emergency Response <u>Plan are included in the project (see p. 34)</u>.

A.	COM	PATIBILITY WITH EXISTING ZONING AND PLANS	Not <u>Applicable</u>	Discussed
	*1)	Discuss any variances, special authorization, or changes proposed to the City Planning		
		Code or Zoning Map, if applicable.		_X_
	*2)	Discuss any conflicts with the Comprehensive Plan of the City and County of San Francisco,		
		if applicable.		<u>X</u>
	*3)	Discuss any conflicts with any other adopted environmental plans and goals of the City or		
		Region, if applicable.	_X_	

The Downtown Plan, and the Planning Code sections implementing it, contain controls of the scale, intensity, and location of growth in downtown San Francisco; architectural preservation; open space; sunlight access; wind; and transportation.

The project would be consistent with the Downtown Plan (with allowable exceptions—, see below) and the zoning for the site, and would thus meet this requirement for a tiered EIR. The Chinatown Plan study area adjoins the site on the north. The relationship of the project to the Chinatown Plan will be discussed in the EIR. (Interim Controls for Chinatown were initiated June 1986, and the Chinatown Plan is in process.)

The project would require exceptions in accordance with the provisions of Section 309 under Section 270 Bulk Limits to exceed the maximum diagonal and length dimensions and the maximum floor area sizes at the upper tower portions of the building and at some of the lower tower portions. The project would also require an exception from the required 15-ft. setback from interior property lines, or center of street specified in Planning Code Section 132.1(c) Separation of Towers. Exception to the setback requirement may be permitted in accordance with the provisions of Section 309 under Section 132.1 subsections (c)2B and (c)2C. The project would require approval under Sections 309 and 321 of the City Planning Code. The project's relationship to the Downtown Plan and Planning Code will be discussed in the EIR.

The project would not conflict with adopted environmental plans or goals.

<sup>\*</sup>Derived from State EIR Guidelines, Appendix C, normally significant effect.

## **B. ENVIRONMENTAL EFFECTS**

Yes No Discussed

1) Land Use. Could the project:

- \* (a) Disrupt the physical arrangement of an established community?
  - (b) Have any substantial impact upon the existing character of the vicinity?

<u>X</u> X

X

\_\_\_ X

The project site is located in the City's financial district, an area characterized by office buildings of various ages and sizes. Upper floors of structures are generally office with ground floors containing banking, office-support retail, and parking. The project would replace existing office uses, at a greater intensity, and would add retail uses to the site. The number of parking spaces at the site would remain the same.

Section 210.3 of the City Planning Code states that the C-3-0 (Downtown Office) District, "playing a leading role in finance corporate headquarters and service industries, and serving as an employment center for the region, consists primarily of high quality office development." The project would be compatible with the C-3-0 land use designation.

Land use to the south, east and west in the site vicinity consists predominantly of high-rise office buildings, many of which are related to banking, finance and commerce, with some ground-level retail uses. Land use to the north and northwest is predominantly low- and mid-rise commercial buildings characteristic of Chinatown which is northwest of the site.

As noted, neighboring buildings to the south, east and west are newer high-rise high intensity office buildings in the financial district, including the Bank of America building (diagonally southeast across California Street from the site), the recently completed 580 California Street building (east of the site across Kearny Street), the Hartford building (immediately west of site) and the International building (south of the site across California Street). There are four low-rise buildings (3 stories) located north of the site across Sacramento St. The buildings south, and east in the immediate site vicinity range in height from about 325 ft. (International building) to 780 ft. (Bank of America). Most of the buildings north and west of the site are low- to mid-rise and range in heights from about 35 to 45 ft.

Buildings under construction in the site vicinity include the 505 Montgomery and 456 Montgomery buildings at the northwest and southeast corners of the intersection of Montgomery and Sacramento Streets.

The nearest open space in the site vicinity is A.P. Gianninni Plaza, part of the Bank of America headquarters building, located diagonally across California Street from the project site. St. Mary's Square is southwest of the site in the block bounded by Kearny and Grant through the block between California and Pine Streets. Portsmouth Square is two blocks north of the site between Kearny Street and Brenham and Washington and Clay Streets. The Chinese Playground is located about one block west of the site on Sacramento Street between Stockton and Grant Streets.

The project would include development of an office building with ground-level retail use and basement parking and would not change existing blocks or street grids; it would not disrupt or divide the physical arrangement of the area. The project would be similar to land uses in the site vicinity. The intensification of office uses at the site which would result from the project would continue high-rise office development in the site vicinity. In view of the above, the project would not have a substantial impact on the existing office/retail character of the vicinity. This topic does not require further analysis in the EIR.

2)	Visu	al Quality. Could the project:	Yes	No	Discussed
*	(a)	Have a substantial, demonstrable negative aesthetic effect?	<u>X</u>	_	<u>X</u>
	(b)	Substantially degrade or obstruct any scenic view of vista now observed from public areas?		X	X
	(c)	Generate obstrusive light or glare substantially impacting other properties?		<u>x</u>	X

The project's design, appearance and possible effects on views will be discussed in the EIR. Mirrored glass would not be used in the project; the building would not result in glare affecting other properties (see mitigation, p. 31). The EIR will, therefore, not discuss glare.

3)	Pop	ulation. Could the project: Yes No Discus	ssed		
*	(a)	Induce substantial growth or concentration			
		of population?		<u>X</u>	_X_
*	(b)	Displace a large number of people (involving either housing or employment)?		X	X
	(c)	Create a substantial demand for additional		_	
		housing in San Francisco, or substantially reduce the housing supply?		<u>X</u>	<u>X</u>

Project specific employment information regarding number and type of employees on site, with existing conditions and with the project, will be included in the EIR.

The project would generate a demand for 91 dwelling units according to the Office Affordable Housing Production Program (OAHPP) formula. The project must comply with the OAHPP, Ordinance No. 358-85. Cumulative and indirect effects including those of this project are addressed, and may be found in, the Downtown Plan EIR. That analysis will not be repeated in the 600 California Street, Federal Home Loan Bank of San Francisco, EIR.

The Downtown Plan EIR concluded that population effects resulting from development in the C-3 districts under the Downtown Plan would not be significant. That conclusion would remain true with the project. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister Street; the San Francisco Main Library; and various branch libraries.

The 235 Pine St. EIR Comments and Responses (84.432E, FEIR certified April 17, 1986) discuss the current validity of the Downtown Plan EIR assumptions and analysis with regard to housing amongst other subjects. The DTPEIR forecasts are considered to be long-term forecasts that focus on the amounts and types of growth expected through the year 2000. No attempt was made to forecast on an annual or short-term basis, and the long-term forecasts include a number of shorter-term ups and downs which average out over time. In general, it was concluded in the 235 Pine FEIR that no new data or information are available that would indicate that the long-term forecasts prepared for the DTPEIR are substantially off-target or misleading. With regard to the specific issue of housing impacts, it was concluded that the assumptions in the DTPEIR remain valid and the analysis remains current. Thus, for example, it was observed in the 235 Pine Comments and Responses that housing completions in San Francisco were about 940 units in 1983–84 and about 1,000 units in 1985. These figures fall squarely within the DTPEIR forecast of 600, 1,500 units per year on average (235 Pine St. Comments and Responses, p. 54).

4)	Trai	nsportation/Circulation. Could the project:	<u>Yes</u>	No	Discussed
*	(a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?		х	X
	(b)	Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?		X	X
	(c)	Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?		x	X
	(d)	Cause a substantial increase in parking demand which cannot be accommodated by		_	
		existing parking facilities?	X		X

Increased employment at the site would increase demand on existing transportation systems. The number of pedestrians in the area would also increase. The project would not alter existing circulation patterns except during construction; its effects on circulation during construction will be discussed in the EIR. The project would retain the existing number (230) of parking spaces on the site, and would move the existing parking entrance from Kearny Street to Sacramento Street. The project would alter existing localized circulation patterns, related to site parking. The project would not be expected to alter other circulation patterns. Localized transportation impacts of the project, including potential effects on Muni service on Sacramento Street will be analyzed in the EIR.

The cumulative transportation effects of development in the C-3 districts, including the project, are analyzed in the Downtown Plan EIR. The Planning Commission, in certifying the Downtown Plan EIR, determined that cumulative transportation impacts would have a significant impact. The cumulative analysis in the Downtown Plan regarding transportation will be summarized and incorporated by reference into the 600 California Street EIR, and the project effects in relation to cumulative impacts will be discussed. The analysis in the Downtown Plan EIR remains current regarding future and project conditions.

5)	Nois	e. Could the project:	Yes	No	Discussed
*	(a)	Increase substantially the ambient noise levels for adjoining areas?		X	_X_
	(b)	Violate Title 24 Noise Insulation Standards, if applicable?		_ <u>X</u>	X
	(c)	Be substantially impacted by existing noise levels?		<u>X</u>	<u>X</u>

## **Project Operation**

The noise environment of the site, like all downtown San Francisco, is dominated by vehicular traffic noise. The Downtown Plan EIR indicates a day-night average noise level (Ldn) of 75 dBA on California Street and 76 dBA on Kearny Street adjacent to the site in 1984./1,2/ The Environmental Protection Element of the Master Plan contains guidelines for determining the compatibility of various land uses with different noise environments. For office and commercial uses (including retail activities), the guidelines recommend no special noise control measures in an exterior noise environment up to a Ldn of 70 dBA. For noise levels of 75 dBA and above, the guidelines recommend an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. The project sponsor has indicated that noise insulation measures would be included as part of the design (see mitigation, p. 31). The proposed structure would not include housing, so Title 24 Noise Standards would not be applicable.

Project operation would not result in perceptibly greater noise levels than those existing in the area. The amount of traffic generated by the project during any hour of the day, and cumulative traffic increases at the time of project completion, would cause traffic noise levels to increase by one dBA or less. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development including the project./3/

The project would be required to comply with the San Francisco Noise Ordinance, San Francisco Police Code Section 2909, "Fixed Source Noise Levels," which regulates mechanical equipment noise. The project site and surrounding area are within the C-3-0 district. In this district, the ordinance limits equipment noise levels at the property line to 70 dBA between 7:00 a.m. to 10:00 p.m. and 60 dBA between the hours of 10:00 p.m. and 7:00 a.m. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the noise environment at the site. The project engineer and architect would include design features in the building to limit mechanical equipment noise levels to 60 dBA. As equipment noise would be limited to 60 dBA to meet the nighttime limit, it would not be perceptible above the ambient noise levels in the project area; operational noise requires no further analysis and will not be included in the EIR.

## Construction

Demolition, excavation and building construction would temporarily increase noise in the site vicinity.

Project construction would take place over a maximum of 24 months, and would increase noise levels in surrounding areas. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener.

Typical construction noise levels, other than for pile driving range from 78 to 89 dBA at 50 ft. Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the City Police Code). The ordinance requires that sound levels of construction equipment other than impact tools not exceed 80 dBA at a distance of 100 ft. from the source. Impact tools (jackhammers, piledrivers, impact wrenches) must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Ordinance prohibits construction work at night, from 8:00 p.m. to 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property lines, unless a special permit is authorized by the Director of Public Works.

The project would not require piledriving.

Nearly all of the structures in the project vicinity are office buildings except buildings across Sacramento Street, about 140 ft. west of the property line of the project site, where residential units occupy the upper floors. Exterior noise levels from the noisiest phases of construction would be about 80 dBA at a distance of 140 ft. Noise at levels greater than 60 dBA can interfere with normal speech and concentration; noise levels greater than 70 dBA would require workers and residents to close windows or shout to communicate. With the windows open, the buildings would provide a 10 dBA reduction of exterior noise levels, resulting in interior noise levels during the nosiest phases of construction of about 70 dBA at 140 ft., interfering with speech and concentration. Interior noise levels with the windows closed would be about 20 dBA lower than exterior noise levels.

No additional developments are planned in the project area which would coincide with the construction schedule of the proposed project.

In summary, during the majority of construction activity, noise levels would be expected to be above existing levels in the area. There would be times, particularly during the operation of impact wrenches, when noise would interfere with indoor activities in nearby offices, retail stores and residential units on Sacramento Street. Mitigation measures are included in the project to reduce construction noise (see p. 31). Construction noise requires no further analysis and will not be included in the EIR.

#### NOTES - Noise

/1/ San Francisco Department of City Planning, <u>Downtown Plan Environmental Impact</u> Report (EIR), EE81.3, certified October 18, 1984, Vol. 1, Table IV.J.2.

/2/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulated the response of the human ear to various frequencies of sound.

Ldn, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10:00 p.m. and 7:00 a.m. is weighted 10 dBA higher than daytime noise.

/3/ See Downtown Plan EIR, Vol. 1, Continuous Section IV.E. generally and Section IV.J., pp. IV.J.8 - 18. Increases of 1 dBA or less in environmental noise are not noticeable by most people outside a laboratory situation (National Academy of Sciences, Highway Research Board, Research Report No. 117 (1971)). (See also FHWA Highway Traffic Noise Prediction Model, Report #FHWA-RD-77-108, December, 1978, p. 8, regarding doubling of traffic volumes producing increases of 3 dBA or more, which are noticed by most people.)

6)	Air Quality/Climate. Could the project:	Yes	<u>No</u>	Discussed
*	(a) Violate any ambient air quality standard or contribute substantially to an existing or projected air quality			
	violation?		<u>X**</u>	<u>X</u>
*	(b) Expose sensitive receptors to substantial pollutant concentrations?		<u>X</u>	<u>X</u>
	(c) Permeate its vicinity with objectionable odors?		<u>X</u>	
	(d) Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community			
	or region?	_X_		<u>X</u>

<sup>\*\*</sup> The site-specific traffic impacts created by this project are not expected to be significant, as noted in the discussion herein. However, the localized air quality effects of the project will be discussed in the EIR.

Demolition, grading and other construction activities would temporarily affect local air quality for up to two years, causing a temporary increase in particulate dust and other pollutants. Dust emission during demolition and excavation would increase particulate concentrations near the site. Dustfall can be expected at times on surfaces within 200 to 800 ft. Under high winds exceeding 12 miles per hour, localized effects including human discomfort might occur downwind from blowing dust. Construction dust is composed primarily of large particles that settle out of the atmosphere more rapidly with increasing distance from the source. More of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases, as well as sensitive electronics or communications equipment. The project sponsor would require the contractor to wet down the construction site twice a day during construction to reduce particulates by at least 50% (see mitigation, pp. 31–32).

Diesel-powered equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions (see mitigation, pp. 31-32). Construction air quality effects require no further analysis and will not be included in the EIR.

The cumulative effects on air quality of traffic emissions from traffic generated by development in the C-3 districts including the project are analyzed in the Downtown Plan EIR. The project effects in relation to cumulative effects will be discussed and localized air quality effects of the project will be discussed in the EIR for the project.

Potential shadowing impacts of the project on sidewalks, parks and other open spaces will be discussed in the EIR. The analysis will include sun path and shadow diagrams.

Section 148 of the Planning Code establishes comfort criteria of 11 mph equivalent wind speed for pedestrian areas and 7 mph for seating areas, not to be exceeded more than 10% of the time, year-round between 7:00 a.m. and 6:00 p.m. Project wind effects including the results of wind tunnel testing, and the effects of the project in relation to the Downtown Plan criteria will be discussed in the project EIR.

7)	<u>Utili</u>	ties/Public Services. Could the project:	Yes	No	Discussed
*	(a)	Breach published national, state or local standards relating to solid waste or			
		litter control?		X	
*	(b)	Extend a sewer trunk line with capacity to			<u></u>
		serve new development?		<u>X</u>	_X_
	(c)	Substantially increase demand for schools,			
		recreation or other public facilities?		<u>X</u>	_X_
	(d)	Require major expansion of power, water,			
		or communications facilities?		<u>X</u>	_X_

The Downtown Plan EIR concluded that demand for utilities and public services resulting from development in the C-3 districts under the Downtown Plan would not be significant. The project would fall within this development forecast. The Downtown Plan EIR analysis remains current and valid for future and project conditions. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister Street; the San Francisco Main Library and various branch libraries. This topic requires no further analysis in the EIR.

8)	Biology. Could the project:	<u>Yes</u>	No	Discussed
*	(a) Substantially affect a rare or endangered species of animal or plant or the habitat of the species?		X	
*	(b) Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife		_	_
	species? (c) Require removal of substantial numbers of		<u>X</u>	<u>X</u>
	mature, scenic trees?	_	<u>X</u>	

The site is covered by impervious surfaces. The project would not affect plant or animal habitats. This topic will not be discussed in the EIR.

9)	Geology/Topography. Could the project:	Yes	<u>No</u>	Discussed
	(a) Expose people or structures to major geologic hazards (slides, subsidence, erosion, and liquefaction)?		<u>x</u>	<u>X</u>

(b)	Change substantially the topography of any unique geologic or physical features of	Yes 1	<u>No</u>	Discussed
	the site?		<u>X</u>	

The project site is at about 36 ft., San Francisco Datum (SFD)./1/ Soils at the site consist of loose to medium-dense sand (approximately five to 10 ft.), very stiff clayey and sandy soil (approximately 10 ft.), underlain by highly weathered bedrock of interbedded sandstone, and shale./2/ Groundwater levels are expected to be between 10 and 20 ft. below the ground surface./2/

Excavation for the project foundations and parking garage would be conducted to a depth of about six to 16 ft. SFD. The existing basement is at about 24 ft. SFD. Maximum excavation depth would be to about 30 ft. below grade or about 18 ft. below the existing basement (six ft. SFD)./2/ The project would be supported by a five-foot-thick mat foundation bearing on bedrock on the western portion of the site and on clayey soil on the eastern portion of the site./2/

Dewatering would be required during excavation, and could cause some settlement of nearby buildings. The project would include measures to mitigate this potential impact (see p. 32).

Pit walls would be shored up to prevent lateral movement during excavation. The adjacent Hartford Building may need to be underpinned should excavation go below the base of its foundation, to avoid such damage as cracking of walls or foundations or sagging of floors. The building contractor must comply with the San Francisco Building Code and the Excavation Standards of the California Occupational Safety and Health Agency. Pre-construction surveys of adjacent streets and buildings would be conducted if so recommended in the final soils report and would determine what measures, if any, would be needed to protect these structures.

The closest active faults to San Francisco are the San Andreas Fault, about nine miles southwest of Downtown, and the Hayward and Calaveras Faults, about 15 and 30 miles east of Downtown, respectively. The project area would experience Strong (Intensity Level D, general but not universal fall of brick chimneys and cracks in masonry and brick work) groundshaking during a major earthquake./3/ The site is within an area of liquefaction or subsidence./4/ However, the preliminary geotechnical report determined

that the site would not be susceptible to severe liquefaction and subsidence./2/ It is not within an area of potential tsunami or seiche flooding./5/

The project sponsor would follow the recommendations of structural and foundation reports to be prepared for any excavation and construction on the site. The project must meet current seismic engineering standards of the San Francisco Building Code which include earthquake-resistant design and materials. The Code is designed to allow for some structural damage to buildings but not collapse during a major earthquake (see also Mitigation Measures, p. 32, for the project's emergency response plan). The project would replace the existing Federal Home Loan Building and the parking garage, both built prior to current seismic safety code standards and therefore generally more susceptable to earthquake damage.

The project would not have a substantial effect on geology or topography, and this topic will not be discussed in the project EIR.

## NOTES - Geology/Topography

/1/ San Francisco City Datum established the City's "0" point for surveying purposes at approximately 8.6 ft. above mean sea level.

/2/ Harding Lawson Associates, Phase 1 Geotechnical Consultation, Proposed Office Building, California and Kearny Streets, February 7, 1986, available for review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, Sixth Floor. A final report will be prepared for the project.

/3/ URS/John A. Blume and Associates, <u>San Francisco Seismic Safety Investigation</u>, 1974. Groundshaking intensities that would result from a major earthquake were projected and classified on a five-point scale ranging from E (Weak) through A (Very Violent).

/4/ <u>Ibid</u>. The project site is included within an area of liquefaction potential and in a subsidence hazard area. Liquefaction is the transformation of granular material, such as loose, wet sand, into a fluid-like state similar to quicksand. Subsidence is a lowering of the ground surface from settlement of fill or alluvium. This can occur from groundshaking, withdrawal of groundwater, or other causes.

/5/ A.W. Garcia and J.R. Houston, Type 16 Floor Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Federal Insurance Administration, Department of Housing and Urban Development, November, 1975. Maximum flood elevations for earthquake-induced tsunamis have been estimated to be about elevation -3.5 ft. for a 100-year event and 0.5 ft. for a 500-year event (elevations from San Francisco Datum, 8.64 ft. above mean sea level), both of which would be below site grade.

10)	Wat	er. Could the project:	Yes	No	Discussed
*	(a)	Substantially degrade water quality, or			
	(1. X	contaminate a public water supply?	<del></del>	<u>X</u>	
*	(b)	Substantially degrade or deplete ground water recharge?		_X	_X_
*	(c)	Cause substantial flooding, erosion or			
		siltation?		X	

As discussed above, the project would include excavation to depths that reach the water table, and dewatering could be required. Dewatering could produce localized subsidence, which could damage streets or older buildings in the immediate site vicinity. The sponsor has agreed to measures to mitigate the effects of dewatering (see p. 32). Site runoff would drain into the City's combined sanitary and storm drainage system. The project would not affect drainage patterns or water quality because the site is now entirely covered with impermeable surfaces. No further analysis of this topic is required in the EIR.

11)	Ener	rgy/Natural Resources. Could the project:	Yes	No	Discussed
*	(a)	Encourage activities which result in the use of large amounts of fuel, water, or			
*	(b)	energy, or use these in a wasteful manner? Have a substantial effect on the potential use, extraction, or depletion of a natural		<u>X</u>	<u>X</u>
		resource?		<u>X</u>	<u>X</u>

Annual energy consumption by existing office and retail uses on the site is about 3.07 million kWh of electricity and about 35,600 therms of steam, equal to about 35.0 billion Btu at the source./1,2/ A minimal but unknown amount of energy is consumed by the parking garage on the site. Natural gas is not used by existing uses at the site.

Removal of existing structures would require an unknown amount of energy. Fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 641 billion Btu of gasoline, diesel fuel, natural gas, and electricity./3/ Distributed over the estimated 50-year life of the project, this would be about 12.8 billion Btu per year, or about 36% of building energy requirements.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Administrative Code. Documentation showing

compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

Table 1, p. 22, shows the estimated operational energy which would be used by the project. Project demand for electricity during PG&E's peak electrical load periods, July and August afternoons, would be about 740 kW, an estimated 0.005% of PG&E's peak load of 16,000 MW./4/ Project demand for natural gas during PG&E's peak natural gas load periods, January mornings, would be 7 million Btu per day, or about 0.2% of PG&E's peak load of about 3.7 billion Btu per day./4/ Annual and peak daily electricity and natural gas consumption are shown in Figures 3 and 4, pp. 23-24. Measures to reduce energy consumption are included as part of the project (see pp. 33-34).

Project-related transportation would cause additional, off-site energy consumption. Annual project-related trips (about 189,000 auto vehicle trip ends [vte], about 184,000 bus person trips ends [pte], 18,300 train pte, 7,700 ferry pte, 14,100 jitney/van/taxi/motorcycle/charter bus pte, 210,000 BART pte, and 281,000 Muni electric pte) would require about 121,700 gallons of gasoline and diesel fuel and about 1.29 million kWh of electricity annually, as indicated in Table 2, p. 25. These figures were calculated based on data contained in the Downtown Plan EIR. The total annual transportation energy demand, converted with at-source factors to a common thermal energy unit, would be about 30.8 billion Btu, the energy equivalent of 5,500 barrels of oil. This projected use is based upon the mix of highway vehicles in California in 1987. Vehicle fuel use is expected to decrease as the vehicle fleet becomes more efficient.

Projections of electrical use for growth that would occur under the Downtown Plan, as analyzed in the Downtown Plan EIR, indicate an increase of about 330 to 350 million kWh per year between 1984 and 2000, as a result of all new development occurring in the C-3 district. Natural gas consumption is expected to increase by 470 million cubic ft. (about five million therms) per year during the same time period, of which 210 cubic ft. (about two million therms) per year would be for office uses.

Increased San Francisco energy demands to the year 2000 would be met by PG&E from nuclear sources, oil and gas facilities, hydroelectric and geothermal facilities, and other sources such as cogeneration, wind and imports. PG&E plans to continue receiving most of its natural gas from Canada and Texas under long-term contracts.

#### TABLE 1: ESTIMATED PROJECT ENERGY USE/a/

## Daily Natural Gas Consumption/b/

Estimated natural gas consumption per sq. ft. Estimated daily natural gas consumption

11.5 Btu/c/ 37.5 Therms

## Monthly Electric Consumption/b/

Estimated electrical consumption per sq. ft. Estimated total electrical consumption

0.86 kWh (8,810 Btu)/d/ 279,000 kWh (2.8 billion Btu)

## **Annual Consumption**

Estimated total annual natural gas consumption Estimated total annual electrical consumption Estimated total annual energy consumption 11,060 Therms (1.11 billion Btu)
3.4 million kWh (34.8 billion Btu)
35.9 billion Btu (6,410 barrels of oil)

/a/ Energy use includes space conditioning, service water heating and lighting in accordance with allowable limits under Title 24. Estimated electricity includes an additional three kWh/sq. ft./year, consumed by appliances such as typewriters, computers, coffee makers, etc., than assumed by Title 24 estimates.

/b/ Electricity and gas consumption were calculated for the project by Flack & Kurtz, Consulting Engineers. These calculations are available for review at the Office of Environmental Review, 450 McAllister St.

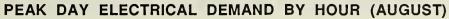
/c/ Btu (British thermal unit): a standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water 1 degree Fahrenheit (251.97 calories) at sea level.

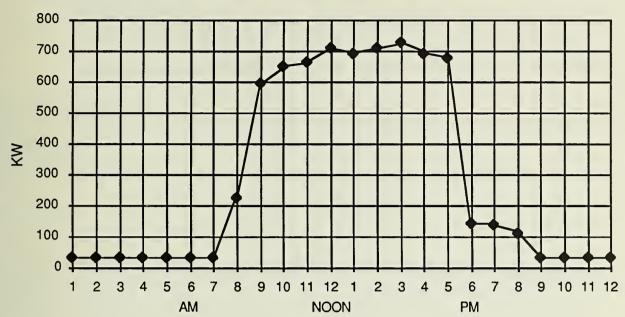
/d/ Energy Conversion Factors:

one gallon gasoline = 125,000 BTU
one kilowatt (kW) = 10,239 BTU
one therm = 100,000 BTU
one barrel oil = 5,600,000 BTU

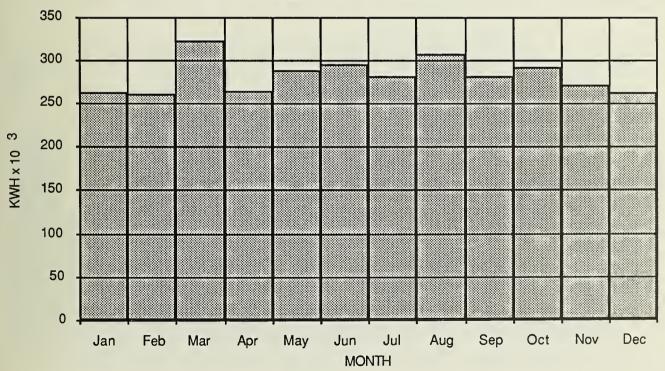
SOURCE: Environmental Science Associates, Inc. and Department of City Planning

The Downtown Plan EIR concluded that energy consumption resulting from development in the C-3 district under the Downtown Plan would not be significant and that conclusion remains valid for the future and project conditions. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister Street; the San Francisco Main Library; and various branch libraries.





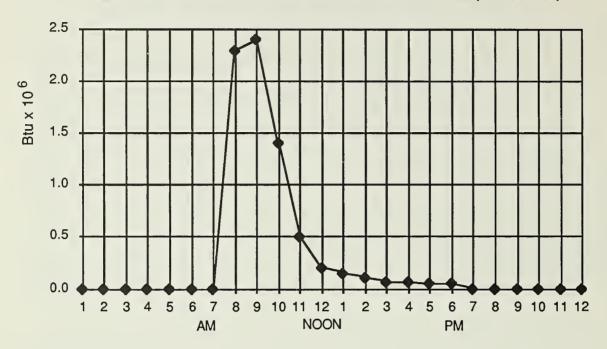
## ANNUAL CONSUMPTION OF ELECTRICITY BY MONTH



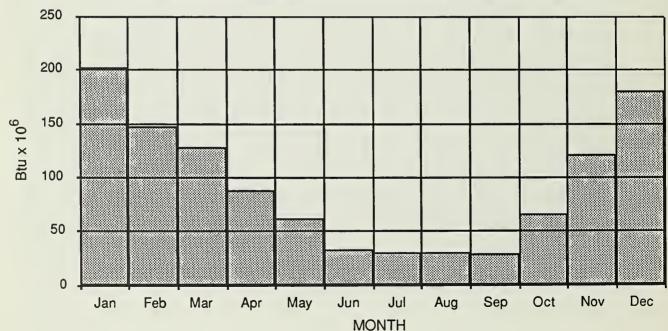
0 California Street deral Home Loan Bank of San Francisco FIGURE 3
PROJECTED ELECTRICAL LOAD
DISTRIBUTION CURVES

URCE: ESA

## PEAK DAY NATURAL GAS DEMAND BY HOUR (JANUARY)







600 California Street Federal Home Loan Bank of San Francisco FIGURE 4
PROJECTED NATURAL GAS
DISTRIBUTION CURVES

SOURCE: ESA

TABLE 2: PROJECT-RELATED ANNUAL TRANSPORTATION ENERGY CONSUMPTION/a/

	Electricity (kWh)	Gasoline (Gallons)	Diesel (Gallons)	Total Btu (Billion)
Auto/Taxi/Jitney/				
Motorcycle/Charter Bus		97,000		13.6
BART	1,159,000			11.9
Muni Electric	129,000			1.3
Regional Bus Systems			20,450	3.3
SPRR			4,240	0.69
Project Total	1,290,000	97,000	24,700	30.8

/a/ The methods used to calculate these figures are described in detail in the Downtown Plan EIR, EE81.8, certified November 18, 1984, Appendix N and the associated data is contained in Table No. 6 of that document. Calculations are also based on vehicle miles travelled (see calculations for the project on file at the Department of City Planning, Office of Environmental Review, 450 McAllister Street).

SOURCE: Environmental Science Associates, Inc.

This topic, energy impacts, requires no further analysis and will not be discussed in the EIR.

Average water use is projected to be 21,100 gallons per day. This demand could be accommodated by existing supplies. This topic will not be discussed in the EIR.

#### NOTES - Energy

/1/ Existing energy use is based on PG&E bills which were available only for the months of March, April, May, June, July, October and November of 1985 and January and February 1986. Energy use for months without available bills was based on months with bills which were expected to be comparable in energy use. To account for a 12-month period, August consumption was estimated to be the same as July, and September was estimated to be the same as October use. For steam use, March, April, June, July, August, September, October, November and December 1985 consumption was based on PG&E bills and March values were used to estimate January and February consumption; April consumption was used to estimate May's consumption in order to account for a 12 month period.

/2/ The British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level; all references to Btu in this lnitial Study are at-source values. The term "at-source" means that adjustments have been made in the calculation of the thermal energy equivalent (Btu) for losses in energy that occur during generation, transmission, and distribution of the various energy forms as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Non-Residential Buildings, Energy Conservation and Development Commission, Sacramento, California and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978 Energy and Transportation System, California Department of Transportation, Sacramento, California, Project #20-7, Task 8.

/3/ Hannon, B., et al., 1978, "Energy and Labor in the Construction Sector", Science 202:837-847.

/4/ San Francisco Department of City Planning, <u>Downtown Plan Environmental Impact Report</u> (EIR) (EE81.3), certified October 18, 1984, Vol. 1, pp. IV.G.3-4.

12)	Haza	ards. Could the project:	Yes	No	Discussed
*	(a)	Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or			
*	(b)	animal or plant populations in the area affected? Interfere with emergency response plans or		<u>X</u>	
	(0)	emergency evacuation plans?		X	X
	(c)	Create a potentially substantial fire hazard?	_	X	X

The project would increase the daytime population in downtown San Francisco. Employees in the proposed building would contribute to congestion if an emergency evacuation of the downtown area were required. An evacuation and emergency response would be developed as part of the proposed project (see p. 34). The project's emergency plan would be coordinated with the City's emergency planning activities. This mitigation measure is proposed as part of the project; thus this topic will not be discussed in the EIR.

The increased number of persons using the site would not substantially increase the fire hazard at the site as the project would be required to conform to the Life Safety provisions of the San Francisco Building Code and Title 24 of the State Building Code. The Fire Department has determined that no additional fire stations would be needed to serve cumulative development intil the most major proposals came on-line (such as Rincon Point/South Beach and Mission Bay (Edward Phipps, Assistant Chief, Support Services, letter, July 9, 1984). Therefore, it is not anticipated that the project would create a substantial fire hazard and this issue will not be discussed in the EIR.

13)	Cultur	ral. Could the project:	Yes	No	Discussed
*	]	Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of			
	(b)	a scientific study? Conflict with established recreational, educational, religious or scientific uses of the area?	<u>X</u>	x	<u>X</u>
	:	Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code?		X	<u>x</u>

Excavation required for the project would occur in existing disturbed soils and fill and 18-ft. below foundations of the existing buildings. Archival research was conducted regarding the possibility of encountering artifacts on the site./1/ The project site historically was situated about one block west of the shoreline at Yerba Buena Cove before 1849 (pre-historic through Spanish-Mexican period). The archival research report indicates that archaeological remains from the Spanish-Mexican, Gold Rush and City Building periods could exist on the site./1/ Such a find could be considered of potential archaeologic and historic significance. Cultural resources will be discussed in the EIR.

The San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings in 1976. In that inventory, approximately ten percent of the City's entire stock of buildings were awarded a rating for architectural merit ranging from a low of "0" to a high of "5". The total number of buildings which were rated from "3" to "5" represent less than two percent of the City's entire building stock.

The Foundation for San Francisco's Architectural Heritage conducted a survey which assigned ratings to buildings in the C-3 District. The survey rated buildings from a high of "A" (Highest importance) to "D" (Minor or No Importance). The criteria used in the evaluation were based on guidelines of the National Trust for Historic Preservation, the National Register of Historic Places, and the State Historic Resources Inventory.

The Downtown Plan categorizes historically and architecturally significant buildings into either Category I or II (significant buildings) or Category III or IV (contributory buildings).

It is the intent of the Downtown Plan that only those buildings categorized I, II, III or IV would be protected within the C-3 area.

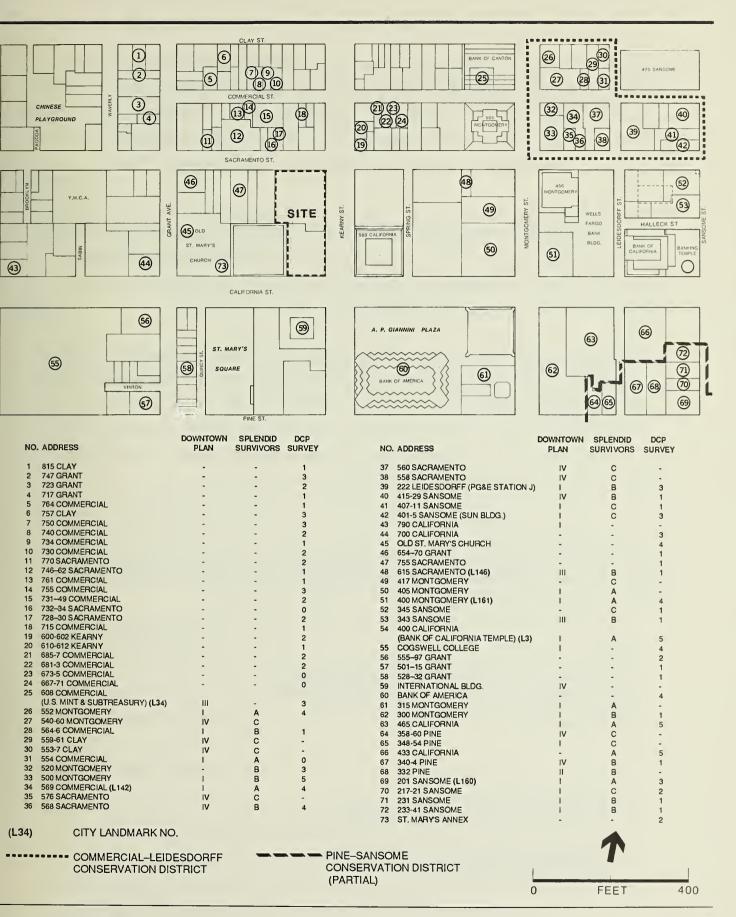
Figure 5, p. 29, identifies those buildings in the project area that are landmarks or are included in the (1) Department of City Planning 1976 Architectural Inventory, the (2) Heritage Survey, and/or (3) the Downtown Plan.

The two buildings which occupy the site, the 600 California Street office building and the 551 Kearny Street parking garage, would be demolished for the project. Neither is designated significant or contributory for architectural merit in the Downtown Plan.

None of the buildings on the project block, including those on the project site, were rated by Heritage in its 1978 survey of the Downtown C-3 District, or are included in Categories I-IV (significant and contributory) for architectural merit in the Downtown Plan and Planning Code. The Kearny-Belden Conservation District of the Downtown Plan, and designated in Article 11 of the City Planning Code, is located about one block south of the project site. Four buildings on the project block are rated in the Department of City Planning's Architectural Inventory of 1976: St. Mary's Church (west of the project site) at the intersection of California Street and Grant Avenue is rated "4", an adjacent Church annex on California Street (immediately east of St. Mary's Church) is rated "2", and the 654-70 Grant Avenue building and Nan Kue Chinese School building at 755 Sacramento Street (both west of the project site) are rated "1".

Within a one block radius east of the project site are three rated buildings (see Figure 5, p. 29). The Financial Center building at 405 Montgomery Street, one block east of the site, was constructed in 1927; it is rated "A" by Heritage and is a Category I (retain essentially intact) of the Downtown Plan. Adjacent to and north of the Financial Center building is the Kemper Building, at 417 Montgomery, constructed in 1936. The Kemper Building is rated "C" by Heritage; it is not in Categories I–IV of the Downtown Plan. Neither of these buildings are rated in the 1976 City Planning survey.

Within one block south, southeast, and southwest of the site are seven rated buildings including the California Commercial Union Building, 315 Montgomery, at the northwest corner of Pine and Montgomery Streets (one block southeast of the



0 California Street ederal Home Loan Bank of San Francisco

URCES: DOWNTOWN PLAN, SPENDID SURVIVORS, DCP, AND ESA

FIGURE 5
ARCHITECTURAL RESOURCES
IN THE PROJECT VICINITY

project site) rated "A" by Heritage, and Category I in the Downtown Plan. This building was not rated in the 1976 City Planning survey. The International Building, directly south across California Street from the project site, was constructed in 1960 and is rated "4" in the 1976 City Planning survey. The building is not rated by Heritage and is not categorized as historically or architecturally significant in the Downtown Plan.

Within one block north, northeast, and northwest of the site, there are 25 rated buildings none of which were rated in the Downtown Plan or Heritage Survey, but which were rated in the City Planning survey. Ratings ranged from "0" for several buildings located on Commercial St. (673-5 Commercial and 667-71 Commercial) to ratings of "3" for four buildings (747 Grant, 757 Clay, 750 Commercial and 755 Commercial).

Within one block west of the site are two rated buildings; the 790 California St. building is rated Category I in the Downtown Plan and the 700 California St. building is rated "3" in the 1976 City Planning Survey.

The project would not affect any architectural resources on the project block or in the project vicinity; this subject will not be discussed in the EIR.

### NOTE - Cultural

/1/ Mason Tillman Associates, April 11, 1986, 600 California Street Project, Archival Report. This report is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street.

C.	OTHER	<u>Ye</u>	<u>No</u>	Discussed	
	Require approval of permits from City Departments other than Department of City Planning of Bureau of Building Inspection, or from Regional, State or				
	Federal Agencies?		_ <u>X</u>	- —	
D.	MITIGATION MEASURES	Yes N	lo <u>N/</u>	A <u>Discussed</u>	
	<ol> <li>If any significant effects have been identified, are there ways to mitigate them?</li> </ol>	<u>x</u> _		<u>X</u>	
	2) Are all mitigation measures identified above included in the project?	<u>X</u> _		_	

The following are mitigation measures related to topics determined to require no further analysis in the EIR. The EIR will contain a mitigation chapter describing these measures and including other measures which would be, or could be, adopted to reduce potential adverse effects of the project identified in the EIR.

# Visual Quality

 In order to reduce obstrusive light or glare, the project sponsor would not use mirrored glass on the building.

# Noise

- The project sponsor would require the project contractor to muffle and shield intakes and exhaust, shroud or shield impact tools, and use electric-powered, rather than diesel-powered, construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).
- The project sponsor would require the general contractor to construct barriers around the site and stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.
- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise reduction measurements would be prepared by the project sponsor and recommended noise insulation features could be included as part of the proposed building. For example, such design features could include fixed windows and climate control.

# Construction Air Quality

The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other materials; cover trucks hauling debris, soils, sand or other such material; and sweep streets surrounding demolition and

construction sites at least once per day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants by such means as a prohibition on idling motors when equipment is not in use or trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of the construction period.

# Geology/Topography

- A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design, excavation and construction of the project.
- If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines.
- Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Cost for the survey and any necessary repairs to service under the street would be borne by the project sponsor.

# Water Quality

 See the second measure under Geology/Topography, above, for mitigation proposed to prevent sediment from entering storm sewers.

# Energy

# Proposed As Part of the Project

- The project would meet the energy requirements of the State Administrative Code
Title 24, Part 6, Article 2. Energy Conservation Standards for New Non-Residential
Buildings.

Measures Under Consideration by the Project Sponsor

Depending on the final design and energy requirements of the project, the sponsor is considering the following additional conservation measures:

- Use of natural gas for space and hot water heating.
- Multiple light-switching; a variable air volume air conditioning system; and an outside-air/return-air economizer cycle.
- A carbon monoxide monitoring system to control garage ventilation and avoid unnecessary operation of fans.

# Other Measures

- A water economizer cycle system using condenser water to generate chilled water could be installed, so that in hot weather the heat exchangers would cool the water without using excessive amount of electricity.
- The project could incorporate low-flow plumbing to conserve electricity.
- Fluorescent lights with parabolic diffusers could be used to conserve energy and reduce glare. Return-air diffuser slots in light fixtures could reduce air conditioning

loads by removing part of the heat generated by light fixtures. Whenever possible, office suites could be equipped with individualized light switches, and time clock operation to conserve electrical energy.

The sponsor could perform a thorough energy audit of the structure's actual energy use after the first year of occupancy, and implement all cost effective alterations to the structure's energy system identified in the audit, and make results of the audit available to the City.

# Hazards

- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance of final building permits by the Department of Public Works.
- To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

# \*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the

X

major periods of California history or pre-history?

<sup>\*</sup> Derived from State EIR Guidelines, Appendix G, normally significant effect.

*2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	Yes	No X	Discussed
	City i diancintar goals.		<u></u>	
*3.	Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	<u>x</u>	_	_x_
*4.	Would the project cause substantial adverse effects on human beings, either directly or indirectly?		<u>x</u>	
*5.	Is there a serious public controversy concerning the possible environmental effect of the project?		х	

The project would contribute to cumulative impacts in the areas of transportation and air quality. The EIR will discuss by reference the analyses for air quality and transportation contained in the Downtown Plan EIR. Those remain valid conservative analyses for future and project conditions.

# F. DETERMINATION THAT A TIERED EIR IS REQUIRED

In light of the discussion in this Initial Study, a tiered EIR is required for this project pursuant to the requirements of Section 21094(b) as follows:

- 1. The project would be consistent with the Downtown Plan, policies and ordinances for which a Final EIR (EE81.3) was certified October 18, 1984;
- 2. The project would be consistent with applicable local land use plans and zoning pursuant to the Downtown Plan and Planning Code, with allowable exceptions; and,
- 3. Section 21166 does not apply.

As noted, the EIR cumulative impact analysis will rely on the Downtown Plan EIR (DTPEIR) cumulative impact analysis, and that analysis remains valid. The validity of the DTPEIR assumptions and analysis was recently re-established in the Final EIR (FEIR) for 235 Pine St. (84.432E, certified April 17, 1986). (See material contained in the 235 Pine St. Draft Summary of Comments and Responses, at pp. 9-21, 25-30, 32-38 and 54-59.)

The 235 Pine St. EIR Comments and Responses discuss the current validity of the Downtown Plan EIR assumptions and analysis with regard to development and land use forecasts, employment growth, transportation impacts, office rental and vacancy rates and housing production. The DTPEIR forecasts are considered to be long-term forecasts that focus on the amounts and types of growth expected through the year 2000. No attempt was made to forecast on an annual or short-term basis, and the long-term forecasts include a number of shorter-term ups and downs which average out over time. In general, it was concluded in the 235 Pine FEIR that no new data or information are available that would indicate that the long-term forecasts prepared for the DTPEIR are substantially off-target or misleading. With regard to the more specific issues such as transportation impacts, office vacancy rates, housing impacts, etc., it was concluded that the assumptions in the DTPEIR remain valid and the analysis remains current.

# G. ON THE BASIS OF THIS INITIAL STUDY

 I find the proposed project COULD NOT have a significant effect on the
environment, and a NEGATIVE DECLARATION will be prepared by the Department
of City Planning.

- \_\_\_\_ I find although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers \_\_ in the discussion, have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- X I find that the proposed project MAY have a significant effect on the environment, and a tiered ENVIRONMENTAL IMPACT REPORT is required.

Barbara W. Sahm

Environmental Review Officer

Lalla 100 W. Exahin

for

Dean L. Marcris
Director of Planning

Date: 7/10/84

# STATE AGENCIES

Northwest Information Center California Archaeological Inventory Christian Gerike

# CITY AND COUNTY OF SAN FRANCISCO

San Francisco Landmarks Preservation Advisory Board

# **REGIONAL AGENCIES**

Bay Area Air Quality Management District Irwin Mussen

# **GROUPS AND INDIVIDUALS**

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Tony Blaczek Finance Department Coldwell Banker

Chinatown Resource Center David Prowler

Michael V. Dyett Blayney-Dyett

Environmental Planning & Research, Inc. Leslie de Boer

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The Foundation for San Francisco's Architectural Heritage Mark Ryser Deputy Director

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South of Market Alliance

South of Market Association EOC Office L. Meyerzove, Chair

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580 California Street Ventures c/o Gerald D. Hines Interests

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City of San Francisco

California Street Partners c/o Jim Devoti, Milton Myers Co.

Asco Investment Co. of Sacramento c/o John Fung

Ching Wong Min & Wong Man Foon Wong Lok

KHC Investment Co.

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### APPENDIX B: WIND STUDY METHODOLOGY

This summary of wind study methodology is based on studies by Bruce R. White, Ph.D., Associate Professor of Mechanical Engineering at the University of California, Davis. The studies are independent of the University. These reports are available for review at the Department of City Planning, Office of Environmental Review, 450 McAllister St.

### INTRODUCTION

Wind tunnel tests were conducted for winds in the project vicinity in its existing condition and with the project, both in relation to the Downtown Plan wind performance criteria (adopted by the City Planning Commission, November 29, 1984). Wind tunnel measurements and existing weather records for San Francisco were used to predict equivalent mean wind speeds near the project site./1/ These mean wind speeds were compared to comfort criteria of 11 mph for pedestrian areas and seven mph for sitting areas, each not to be exceeded more than 10% of the time. Separate calculations were also done to evaluate compliance with the hazard criteria that hourly average wind speeds may not reach or exceed 26 mph for one hour per year.

A 1 inch = 50 feet scale model of the downtown San Francisco area surrounding the proposed building for several blocks in all directions was provided by ESA. The model tested five configurations: existing; project plus existing; a 9:1 FAR alternative; an alternative with a 50-ft. height on Sacramento; and a No Exceptions to Planning Code alternative.

The model was tested in a wind tunnel that allows testing of natural atmospheric boundary layer flows past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 feet), a test section of 1.22 m (4 feet) wide by 1.83 m (6 feet) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 to 4 meters per second(m/s) or 4.8 to 19.3 miles per hour (mph).

The wind tunnel study was divided into two parts: flow visualization and wind-speed measurements. The flow visualization observations were performed by injecting a continuous stream of smoke at various near-surface locations. The subsequent motion of the smoke was recorded, and prevailing wind directions were determined. Wind-speed measurements were made with a hot-wire anemometer, an instrument that directly related rates of heat transfer to wind speeds by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. Both the mean wind speeds and corresponding turbulence intensities were measured. Thus, high wind speeds and gustiness (changes in wind speeds over short periods of time) could be detected. Hot-wire measurements made close to the surface have an inherent uncertainty of plus or minus (±) five percent of the true values. The ratio of near-surface speed to reference wind speed was calculated from the hot-wire measurements.

Twenty-two test locations were studied for three prevailing wind directions (northwesterly, west-northwesterly and westerly) for the five configurations. These wind conditions are the most common in San Francisco, and are therefore, the most representative for evaluations purposes. The fourth most common wind direction, west-southwesterly, has been found to have quantitatively little impact for areas north of Market St. All hot-wire measurements were taken at the same series of surface points around the building site for the three wind directions and the five cases.

# Methodology and Assumptions

The wind ordinance associated with the Downtown Plan (Section 148) is defined in terms of equivalent wind speed. This term denotes an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

The mean wind speeds at street level were determined by a wind tunnel test and a comparison of the test results with statistically representative records of wind data collected atop the Old Federal Building. Data describing the speed, direction and frequency of occurrence of winds were gathered at the old San Francisco Federal Building, at 50 United Nations Plaza, during the six-year period 1945 to 1950. Measurements taken hourly and averaged over one-minute periods have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00a.m. to 8:00pm., about 62% of the winds blow from three of the 16 directions, as follows: Northwest (NW), 10%; West Northwest (WNW), 14%; West (W), 35%; and, all other winds, 36%. Calm conditions occur 2% of the time.

Each wind tunnel measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the old San Francisco Federal Building. The wind that is measured is an equivalent wind-speed value which is adjusted to include the level of gustiness or turbulence present.

The frequency with which a particular wind velocity is exceeded at any test location is then calculated by using the measured wind tunnel ratios and a specified ground speed to determine the corresponding reference wind speed for each direction. In general, this gives different reference speeds for each direction (NW, WNW, W, and Other). The wind data for San Francisco are then used to calculate the percentage of the time each reference speed would be exceeded. The sum of these is the total percentage of time that the specified ground-level wind speed is exceeded. A computer is used to calculate the total percentages for a series of wind speeds until the speed corresponding to the speed exceeded 10% of the time is found. Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time. This is the time period specified for evaluation of the comfort criteria in the Downtown Plan.

The hazard criterion in the Downtown Plan states that the hourly average wind speed may not reach or exceed 26 mph for one hour per year. The wind data observed at the old San Francisco Federal Building are not full hour average speeds as required by the code, so it is necessary to adjust the equivalent wind speeds to obtain the true hourly average of 26 mph./2/ The adjusted equivalent wind speeds were used to calculate compliance with the hazard criterion.

### Study Results

The locations of the measurement points and the results of the wind tunnel study for compliance with the comfort criteria are summarized in Figures B-1 and B-2, pp. A-46 and A-47.

Wind speeds in the existing setting are from seven to 18 mph. The comfort criterion for pedestrians is violated at nine of the 19 locations at which it applies and the comfort criterion for seating area is violated at all three locations at which it applies. Strong winds, with speeds from 11 mph to 16 mph, occur along California St. between Quincy St.

and Spring St., in A.P. Giannini Plaza, and in St. Mary's Square; winds in those three areas exceed the pedestrian comfort criterion in nine locations and exceed the public seating comfort criterion in two locations. Winds along Sacramento St. and mid-block on Kearny St., between California and Sacramento Sts., range from seven mph to 11 mph; winds there meet the pedestrian comfort criterion at all nine locations. The strongest existing wind, 18 mph, occurs on the rooftop of the existing 600 California St. building, where the wind exceeds the public seating comfort criterion and also violates the hazard criterion. Separate calculations indicate that the hazard criterion is violated on the rooftop of the existing 600 California St. building.

The project would result in winds ranging from six to 16 mph. The project would cause winds to decrease at six of the 22 locations, be unchanged at 11 locations, and increase at five locations. The pedestrian comfort criterion would continue to be violated at nine locations, the seating area criterion would continue to be violated at three locations and the project would cause one new exceedance of the pedestrian comfort criterion. Along California St., winds would increase at one location and decrease at two locations; however, winds at the one location on California St. (in front of the Hartford Building) that now meets the 11 mph criterion would exceed that criterion. Winds in A.P. Giannini Plaza would be unchanged, and would continue to exceed the 11 mph criterion. Winds in St. Mary's Square would be unchanged at 12 mph at one location and decrease from 12 to 11 mph in the other; neither location would meet the 7 mph comfort criterion. Winds along Sacramento and Kearny Sts. would be increased at four locations, unchanged at three locations and decreased at two locations; the pedestrian comfort criterion of 11 mph would be met at all nine of those locations. The hazard criterion would not be violated at any of the locations tested with the project in place.

The 9:1 FAR Alternative would result in wind speeds from six to 17 mph. Compared to the existing setting winds would increase at twelve locations, stay the same at four locations, and decrease at six locations. The pedestrian comfort criterion would be violated at eleven locations and the criterion for seating areas would be violated at all three locations. At the ten points along California St., and in A. P. Giannini Plaza, winds would decrease at two locations, be unchanged at two, and increase at six; the pedestrian comfort criterion would be violated at all ten of the these points. Winds would decrease at two of the seating area locations and would be unchanged at one; the comfort criterion would be violated at all three seating area locations. Winds would be increased at six of the remaining eight locations and decreased at two. All would be in compliance with the pedestrian comfort criterion except at the corner of Spring and Sacramento Sts. The hazard criterion would not be violated.

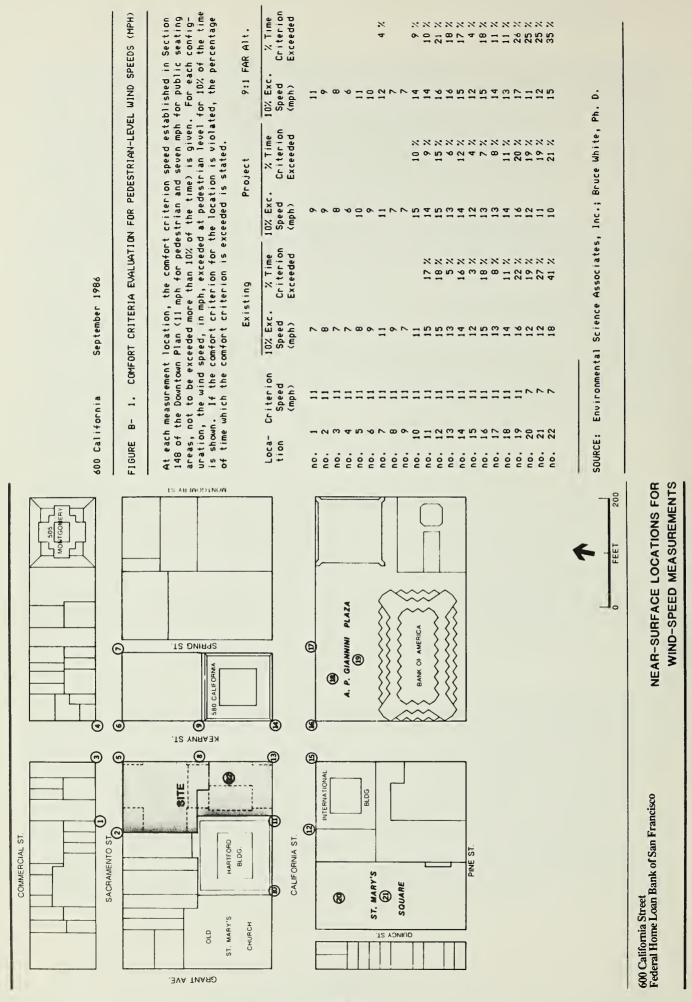
A second alternative, designed with a 50 ft. height on Sacramento Street, would cause winds from seven to 17 mph. Winds would increase at ten locations, remain the same at six locations and decrease at six locations. The pedestrian comfort criterion would be violated at eleven locations and the seating area criterion would be violated at three locations. Along California St. and in A. P. Giannini Plaza winds would decrease at three locations, be unchanged at one, and increase at six. All would violate the pedestrian comfort criterion. The wind speeds in the seating areas in St. Mary's Square would be unchanged and would continue to violate the 7 mph comfort criterion. Winds on the rooftop at 600 California would decrease but would still violate the 7 mph comfort criterion. Away from California St., winds would decrease at two locations, be unchanged at three, and increase at four. All would be in compliance with the pedestrian comfort criterion except at the corner of Spring and Sacramento Sts. The hazard criterion would be violated on the rooftop of the proposed open space of this alternative.

The third alternative, which would require no exceptions to the Planning Code, would cause winds ranging from seven to 17 mph. Winds would increase at 13 locations, remain the same at three, and decrease at six. The pedestrian comfort criterion would be violated at eleven locations and the seating area criterion at three locations. Along California St. and in A. P. Giannini Plaza winds would decrease at two locations, be unchanged at one, and increase at seven; all would remain in violation of the pedestrian comfort criterion. Winds would be unchanged at one location and would increase at one location in St. Mary's Square. Both would continue to be in violation of the seating area criterion. On the roof top open space area of this alternative, winds would be decreased but would remain in violation of the 7 mph comfort criterion. Winds would decrease at three of the remaining locations, would be unchanged at one, and would increase at five; all would be in compliance with the pedestrian comfort criterion except at the corner of Spring and Sacramento Sts. The hazard criterion would not be violated.

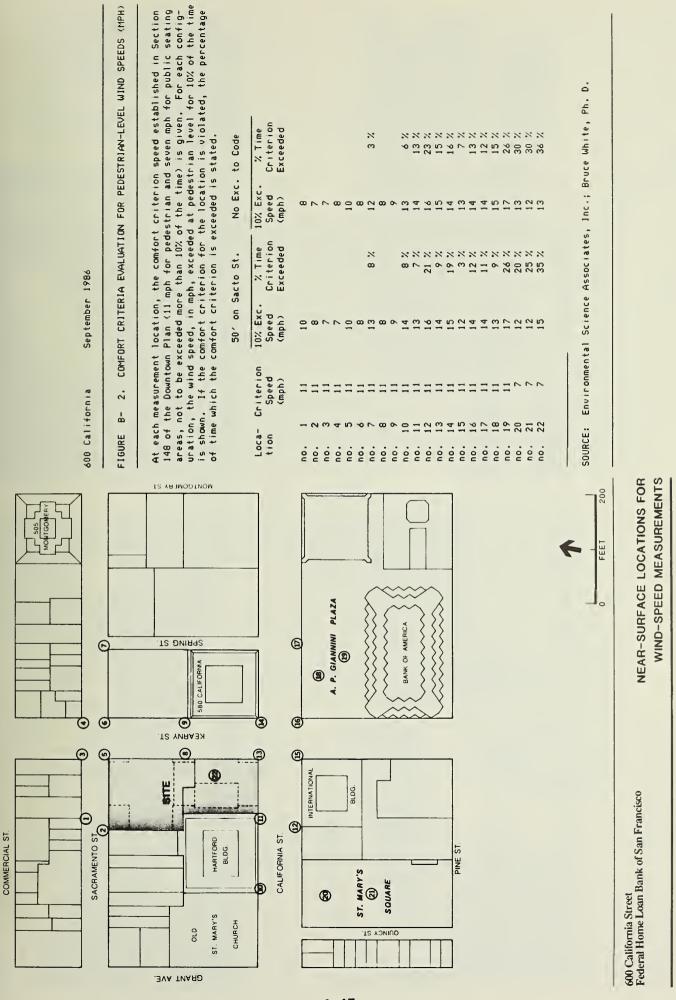
### NOTE - Wind Study Methodology

/1/ Equivalent mean wind speed is defined as the mean wind, multiplied by the quantity (1 plus 3 times the turbulence intensity) divided by 1.45.

/2/ Arens, E., "Designing for an acceptable wind environment", <u>Transactions Engineering</u> Journal, ASCE 107, No. TE2, p. 127-141, 1981.



A-46



A-47

# APPENDIX C: TRANSPORTATION

# TABLE C-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level Servic		Passengers per <u>Seat</u>
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with fewer than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00- 0.50
В	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading ti do not affect scheduled operations.	0.51- 0.75 mes
С	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relative satisfactory operating schedules are still obtained as passenger loatimes are not excessive.	
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to as schedule adherence, as the restricted freedom of movement for passengers requires longer loading times.	1.25
Е	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loatimes increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level Bunching of buses tends to occur, which can rapidly cause operation deteriorate.	el.
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability are extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially incr loading times.	1.51– 1.60 eased

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

Wednesday, June 8, 1983 - 8:00 A.M.- Inbound

N JUDAH - DUBOCE AND CHURCH



Wednesday, September 16, 1981 - 4:50 P.M. - Outbound L TARAVAL - VAN NESS STATION



600 California Street

Federal Home Loan Bank of San Francisco

SOURCE: ESA

Wednesday, September 9, 1981 - 8:20 A.M. - Inbound

M OCEAN VIEW - CIVIC CENTER STATION



Wednesday, October 21, 1981 - 4:20 P.M. - Outbound 38 GEARY - VAN NESS AVE. AND GEARY BLVD.

THE STATE OF STATE OF



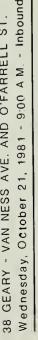
Wednesday, September 16, 1981 - 5:00 P.M.-Outbound N JUDAH - VAN NESS STATION



Wednesday, September 9, 1981 - 8:00 A.M. - Inbound K INGLESIDE - VAN NESS STATION



Wednesday, October 21, 1981 - 9:00 A.M. - Inbound 38 GEARY - VAN NESS AVE. AND O'FARRELL ST.



SOURCE: ESA

Federal Home Loan Bank of San Francisco

600 California Street



Tuesday, September 29, 1981 - 9:00 A.M. - Inbound J CHURCH - CHURCH ST. AND DUBOCE AVE.

Gordon's Gin. It's crystal-clear

30X MARINA EXPRESS - BAYSHORE AVE. AND ARIETA AVE. Wednesday, October 7, 1981 - 8:00 A.M. - Inbound

SOURCE: ESA

### PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in <u>Urban Space for Pedestrians</u> (MIT Press, 1975). Table C-1 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure C-2 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE C-2: PEDESTRIAN FLOW REGIMEN

Flow Regime/a/	<u>Choice</u>	Conflicts	Flow Rate (p/f/m)/b/
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
_	Design Limit – Upp	er Limit of Desirable	e Flow
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

<sup>/</sup>a/ Photographs of these conditions are shown in Figure C-2.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

<sup>/</sup>b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.

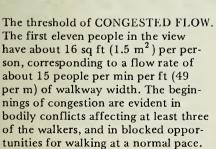
<sup>/</sup>c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m<sup>2</sup>). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely un-

comfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.









The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m<sup>2</sup>) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.



The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m²) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

California Street Ieral Home Loan Bank of San Francisco

URCE: Pushkarev and Zupan

FIGURE C-2
PHOTOS OF PEDESTRIAN FLOW LEVELS



The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m<sup>2</sup>) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.





The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza—which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture—have almost 130 sq ft (12 m²) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m²). Thus, indirect interaction with others is still quite frequent in the upper range of UN-IMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m<sup>2</sup>) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.



Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m²) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

600 California Street Federal Home Loan Bank of San Francisco

SOURCE: Pushkarev and Zupan

FIGURE C-2 (CONTINUED)
PHOTOS OF PEDESTRIAN FLOW LEVELS

### INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made used the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-3). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio calculated by dividing the existing volume by the capacity at Level of Service E.

### PARKING SURVEY ANALYSIS OF EXISTING GARAGE

Environmental Science Associates conducted a survey of the existing 525 Kearny St. garage, to determine the number of parking spaces used for long- and for short-term parking. Long-term parking is identified by the Department of City Planning as any vehicle remaining in a parking space for four hours or more, short-term parking is for less than four hours.

The rate structure for the existing garage is \$5.00/day no matter how long the vehicles stay in the garage.

The survey was conducted by ESA on Wednesday, May 21, 1986, between the hours of about 9:00 a.m. and 5:00 p.m., a total of eight hours. A total of 240 spaces were noted in the garage, and each space was surveyed about once every hour; the garage was designed for 201 vehicles; however, due to the smaller vehicles and double parking, this larger number can be acccommodated. License plates were noted each time a space was surveyed to determine if the space was occupied by the same or a different car at each consecutive hour. (Raw survey data is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St.)

During the survey period, a total of 192 spaces were used for long-term parking (four or more hours) and a total of 48 spaces were used for short-term parking (less than four hours). The parking turnover rate per hour, averaged over the eight-hour period was 0.2, meaning that 20% of the spaces turned over once an hour.

# TABLE C-3: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level Service		Volume/Capacity (v/c) Ratio/a/
Α	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
В	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may encountered. Many drivers begin to feel somewhat restricted wit groups of vehicles. The traffic operation can generally be describ very good.	hin
С	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behturning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more one red traffic signal indication. The traffic operation can generate described as good.	than
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower dema such that queues are periodically cleared, thus preventing excessi back-ups. The traffic operation can generally be described as fair	ve
Е	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of intersection and vehicles may be delayed up to several signal cycle traffic operation can generally be described as poor.	
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of th jammed condition, this volume would be less than capacity.	1.01+ e

/a/ Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

# TABLE C-4: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

Level Servic		
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00- 0.60
В	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61- 0.70
С	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71- 0.80
D	* *	
Е		0.91- 1.00
F	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	

/a/ Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from information in the <u>Highway</u>
<u>Capacity Manual</u>, Special Report 87, Highway Research Board, 1965.

TABLE D-1: SAN FRANCISCO AIR POLLUTANT SUMMARY, 1982-1985

STATION: 900 23rd Street, San Francisco					
POLLUTANT:	TANDARD	<u>1982</u>	<u>1983</u>	1984	1985
OZONE (O <sub>3</sub> ) (Oxidant) 1-hour concentration, ppm/a/ Highest hourly average 0.10 /b/ Number of excesses of state standard Expected Annual Excess (federal)/d/	0.12 /c/	0.08 0 0.0	0.13 1 0.3	0.10 1 0.3	0.09 0 -
CARBON MONOXIDE (CO) 1-hour concentration, ppm Highest hourly average Number of excesses of standard 8-hour concentration, ppm Highest 8-hour average	20 /b,e/ 9 /b,c/	12 0 9.1	7 0 5.1	11.0 0 7.7	10.0 0 7.1
Number of excesses of standard		1	0	0	0
TOTAL SUSPENDED PARTICULATE (TSP) 24-hour concentration, ug/m <sup>3</sup> /a/ Highest 24-hour average Number of excesses of standard/g/ Annual concentration, ug/m <sup>3</sup>	100 /b,f/	126 3	117 4	152 5	158 5
Annual Geometric Mean Annual excess of standard	60 /b,f/	57 No	55 No	60 Yes	62 Yes
LEAD (Pb) 30-day concentration, ug/m <sup>3</sup> Highest 30-day average Number of excesses of standard	1.5 /ს/	0.7	0.4	0.7	0.3
NITROGEN DIOXIDE (NO <sub>2</sub> ) 1-hour concentration, ppm Highest hourly average Number of excesses of standard	0. <b>2</b> 5 /b/	0.13	0.13	0.14 0	0.18
SULFUR DIOXIDE (SO <sub>2</sub> ) 24-hour concentration, ppm Highest 24-hour average Number of excesses of standard/g,h/	0.05 /b/	0.012 0	0.018 0	0.03	0.07

<sup>/</sup>a/ ppm: parts per million.  $ug/m^3$ : micrograms per cubic meter. /b/ State standard, not to be equaled or exceeded, except for CO standards, which are not to be exceeded.

(Continued)

### TABLE D-1: SAN FRANCISCO AIR POLLUTANT SUMMARY 1982-1985 (Continued)

/c/ Federal standard, not to be exceeded more than once per year, except for annual standards, which are not to be exceeded.

/d/ Expected Annual Excess is a three-year average of annual excesses of the federal standard.

/e/ The state one-hour CO standard was revised from 35 ppm to 20 ppm in January 1983. The federal one-hour standard remains 35 ppm.

/f/ The California ARB has redefined the state particulate standard to apply to "inhalable" particulates only (i.e., those which have a diameter less than ten microns). The new standards are 50 ug/m³ for 24-hour averages and 30 ug/m³ for the annual geometric mean. No data is currently available on the particle size distribution of the TSP sampled at the San Francisco monitoring station.

/g/ Number of observed excess days (measurements taken once every six days).
/h/ Exceeding the SO<sub>2</sub> standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the federal standard of 0.14 ppm applies.

SOURCE: BAAQMD, 1981 – 1983, <u>Air Quality in the San Francisco Bay Area</u>; and California ARB, 1982 – 1985, <u>California Air Quality Data</u>.

# APPENDIX E: TYPICAL NOISE LEVELS

TABLE E-1: TYPICAL NOISE LEVELS

	Decibels	
	110	Pile driver (from 50 feet)
Very Loud	100	Light helicopter take-off (from 125 feet)
	90	Light hencopter take-off (from 123 feet)
	80	Diesel truck (from 50 feet)
Land	80	Radio or TV playing in Living Room
Loud	70	Passenger car on city street (from sidewalk)
	60	
Quiet	50	
	40	Whicher
Very Quiet		Whisper
	30	Rustle of paper

SOURCE: Department of City Planning, "A Proposal for Citizen Review: Transportation Noise, Environmental Protection Element of the Comprehensive Plan of San Francisco," August, 1984.

